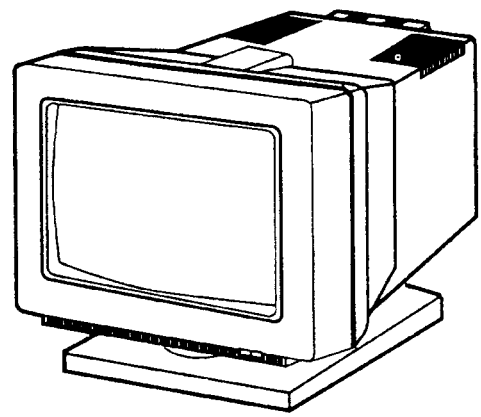
GoldStar

COLOR MONITOR SERVICE MANUAL

CAUTION
BEFORE SERVICING THE UNIT,READ THE "SAFETY PRECAUTIONS" IN THIS MANUAL.



MODEL: CQ430A/CQ432A
CQ438A/CQ440A
1460 PLUS/1453 PLUS
1460 SSI
(CA-14 CHASSIS)

GoldStar

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CONTENTS

1. PREFACE **3**
1.1. Features and Specifications 3
1.2. Timing Chart 4
1.3. Location of Customer Controls 5
1.4. Safety Precautions 6
2. CIRCUIT DESCRIPTION **7**
2.1. Location of Control Parts 7
2.2. Circuit Description 8
3. ADJUSTMENT **9**
3.1. General Information 9
3.2. Automatic Degaussing 9
3.3. Horizontal Hold Adjustment 9
3.4. Horizontal Raster Center Adjustment 9
3.5. Vertical Linearity Adjustment 9
3.6. Vertical Size Adjustment 9
3.7. Side Pin-cushion Adjustment 9
3.8. Horizontal Position Adjustment 9
3.9. Horizontal Size Adjustment 9
3.10. White Balance Adjustment 10
3.11. Contrast Adjustment 10
3.12. Focus Adjustment 10
3.13. Confirmming Self Test Function 10
3.14. Fail Safety Adjustment 10
3.15. Pin Assignment of 15 pin Connector (Male) 10
3.16. Static Convergence System 11
3.17. Geometric Measurements 12
4. DESCRIPTION OF BLOCK DIAGRAM **13-14**
5. TROUBLE SHOOTING GUIDE **15**
5.1. No Power 15
5.2. No Character 16
5.3. No Raster 17
5.4. Trouble in H.V Sync 18
6. SCHEMATIC DIAGRAM FOR CA-14 ..... **19-32**
7. EXPLODED VIEW FOR CA-14 ..... **33-41**
7.1. CQ430 (1460/1453 PLUS, 1460 SSI) Exploded View 33-35
7.2. CQ432A Exploded View 36-38
7.3. CQ440A Exploded View 39-41
8. PCB (Printed Circuit Board) **42**
8.1. Main PCB, Volume P C B (CA-14) 42-43
8.2. Video PCB (CA-14) 44
9. REPLACEMENT PARTS LIST **45-51**

1. PREFACE

This service manual provides various service information, containing the mechanical and electrical structure of the set and adjustment for model CQ430A, 432A, 438A, 440A, 1460 PLUS, 1453 PLUS. This Data Display Monitor was manufactured and assembled under a strict quality control system. If the set has problems, you should repair it in accordance with this service manual. Service should be done only after reading this manual thoroughly.

1.1. FEATURES AND SPECIFICATIONS

This Color Monitor is a high-quality, high-content Analog Display.
It has the following features and specifications.

1.1.1. PICTURE TUBE

Size :	14 inch
Gun :	In-Line
Deflection Angle:	90°
Neck Diameter :	29.1 mm
Phosphor :	X or XE
Dot Pitch :	0.28 mm or 0.39 mm

1.1.2. SIGNAL

2-1. Sync Input Signal:
H.V. Separate TTL Level Posi./Nega.
2-2. Video Input Signal:
RGB ANALOG (0-0.7 Vpp)
2-3. Signal Connector:
15 PIN "D" Type
2-4. Scanning Frequency
- Horizontal: 31.5 KHz/35.2 KHz/35.52 KHz.
- Vertical: 56 Hz/60 Hz/70 Hz/87 Hz (Interlaced)

1.1.3 POWER SUPPLY (Factory Preset)

3-1. Power Rating
AC 120/60 Hz, 0.8A. (U.S)
AC 220-240V/50 Hz, 0.6A (Europe/Australia)
3-2. Input Power Range and Consumption
AC 98-132V/60Hz, 60W MAX. (US)
AC 198-264V/50Hz, 60W MAX. (Europe/Australia)

1.1.4. DISPLAY FEATURES

4-1. Active Video Area:
VGA, 8514/A, EVGA: 245mm x 184 mm
4-2. Display Color: Full Colors
4-3. Display Resolution: 1024 dots x 768 Lines.
4-4. Video Bandwidth: 45 MHz (MAX).

1.1.5. EXTERNAL CONTROL

5-1. Front:	Power ON/OFF Switch, Contrast, Brightness (See Fig. 1)
5-2. Rear:	H-Center,H-Size V-Size, V-Center (See Fig. 1)

1.1.6. ENVIRONMENT

6-1. Operating Temperature:	10 to 41° C (Ambient)
6-2. Relative Humidity:	8 to 80% (noncondensing)
6-3. Altitude:	10,000ft

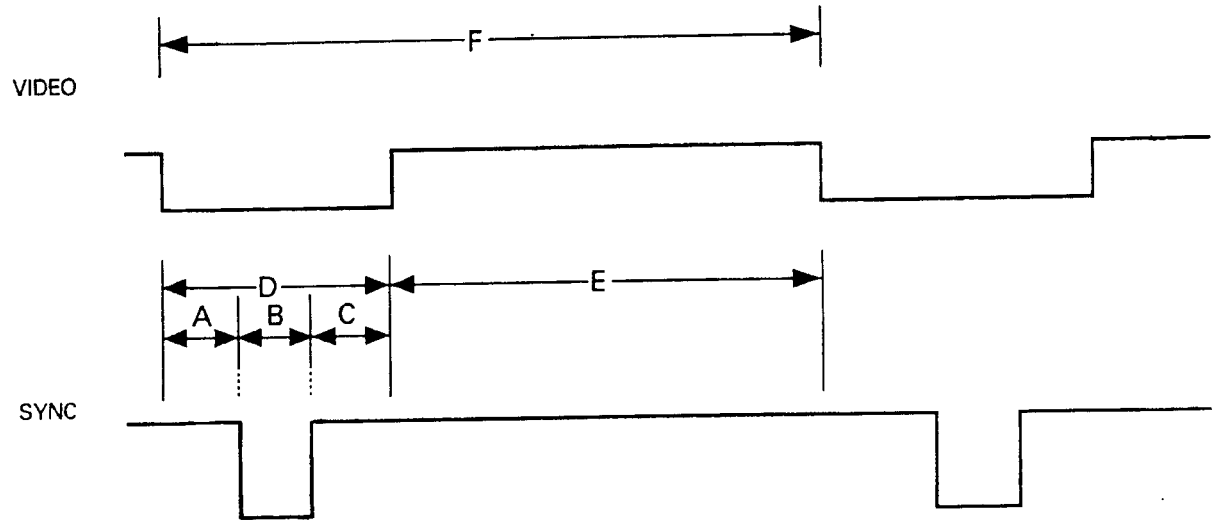
1.1.7. DIMENSIONS & WEIGHT

	CQ430A	CQ432A	CQ438A	CQ440A
Width	356mm (14.0 in)	356mm (14.0 in)	354mm (14.0 in)	356mm (14.0 in)
Depth	375mm (14.7 in)	375mm (14.7 in)	383mm (15.0 in)	378mm (14.7 in)
Height	308mm (12.1 in)	309mm (12.2in)	308mm (12.1 in)	309mm (12.2 in)
H (With T/S)	358mm (14.1 in)	354mm (14.0 in)	360mm (14.2in)	362mm (14.3 in)
Net Weight	11.5 Kg (25.8 lbs.)	11.5 Kg (25.8 lbs)	11.8 Kg (26.0 lbs.)	12.2 Kg (26.9 lbs.)
Gross Weight	13Kg (28.6 lbs.)	13Kg (28.6 lbs.)	13.2Kg (29.1 lbs.)	14.2Kg (31.3 lbs.)

(CQ430A = 1453 PLUS = 1460 PLUS = 1460 SSI)

Mode		H. Resolution	V.Resolution
VGA	1	640/720	350
	2	640/720	400
	3	640/720	480
8514/A		1024	768
E.VGA		800	600

1.2. TIMING CHART



MODE NO.	REFERENCE SIGNAL (IBM PS/II)	SYNC SIGNAL	SYNC POLARITY	UNIT	A	B	C	D	E	F	REMARK
1	H-Freq.: 31.5 KHz V-Freq.: 70 Hz	H V	+ -	uS mS	0.64 1.18	3.81 0.06	1.91 1.91	6.36 3.15	25.42 11.12	31.78 14.27	non-interlaced
2	H-Freq.: 31.5 KHz V-Freq.: 70 Hz	H V	- +	uS mS	0.64 0.38	3.81 0.06	1.91 1.11	6.36 1.55	25.42 12.71	31.78 14.27	non-interlaced
3	H-Freq.: 31.5 KHz V-Freq.: 60 Hz	H V	- -	uS mS	0.64 0.32	3.81 0.06	1.91 1.05	6.36 1.43	25.42 15.25	31.78 16.68	non-interlaced
4	H-Freq.: 35.5 KHz V-Freq.: 87 Hz	H V	+ +	uS mS	0.18 0.014	3.92 0.113	1.25 0.563	5.35 0.69	22.80 10.81	28.15 11.50	interlaced
5	H-Freq.: 35.2 KHz V-Freq.: 56 Hz	H V	+/- +/-	uS mS	0.67 0.03	2.00 0.06	3.56 0.63	6.23 0.72	22.22 17.06	28.45 17.78	non-interlaced

1.3. LOCATION OF CUSTOMER CONTROLS

This Color Monitor uses a 15-pin "D" type connector for Analog input. Figure 1 shows the monitor controls on the front and rear panels.

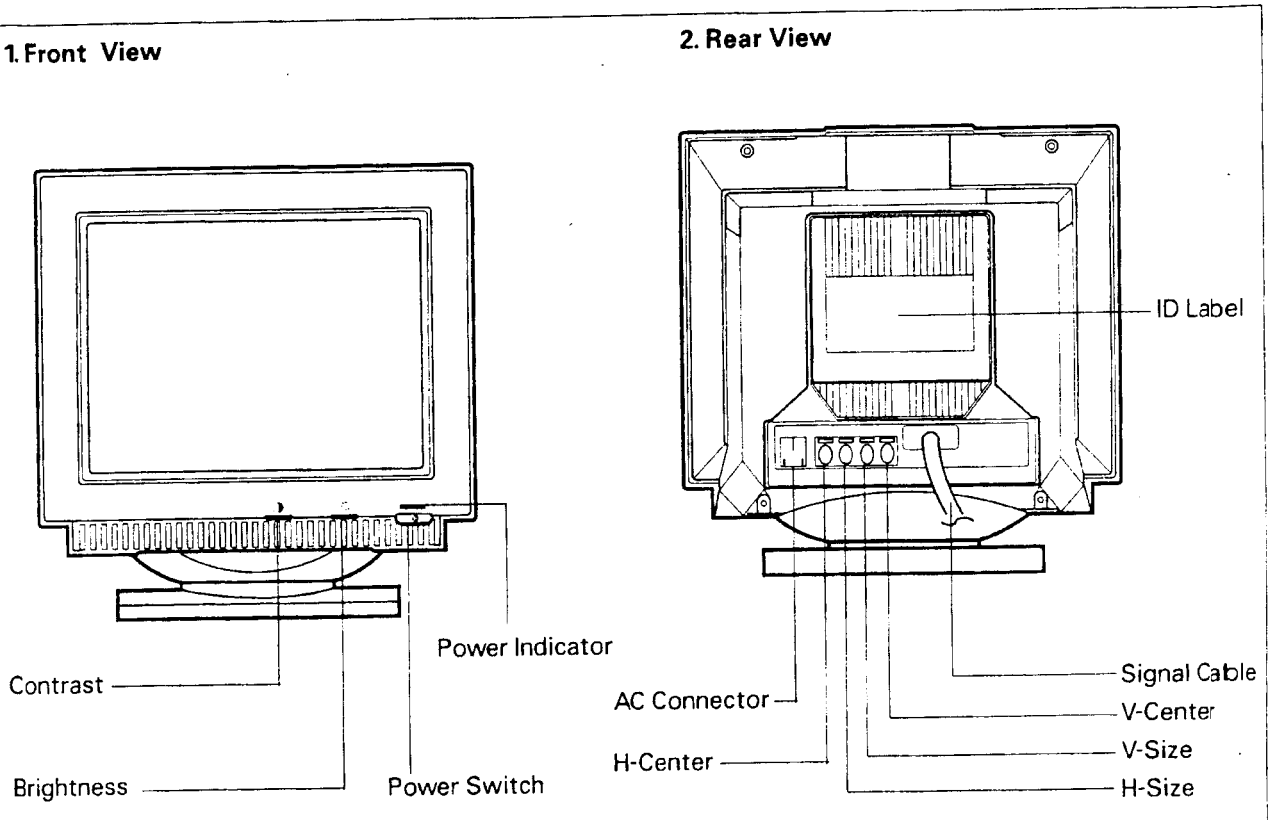


Figure 1, Monitor Controls (CQ430A/1460 PLUS/1453 PLUS, 1460 SSI)

- **POWER**
  The power switch is push button type.
  Push this button, the power is ON.
  Push this button again, the power is OFF.

- **CONTRAST**
  Slide this knob to right side to increase contrast.

- **BRIGHTNESS**
  Slide this knob to right side to increase brightness.

- **V-SIZE**
  Turn this control to adjust the vertical size of the display.

- **H-SIZE**
  Turn this control to adjust the horizontal size of the display.

- **V-CENTER**
  Turn this control to adjust the vertical Center of the display.

- **H-CENTER**
  Turn this control to adjust the horizontal image center of the display.

1.4. SAFETY PRECAUTIONS

SAFETY-RELATED COMPONENT WARNING!

There are special components used in GoldStar color monitor which are important for safety. These parts are marked (⚠) on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with the manufacture's specified parts to prevent X-RADIATION, shock, fire or other hazards. Do not modify the original design without obtaining written permission from GoldStar or this will void the original parts and labor guarantee.

CAUTION: No modification of any circuit should be attempted.
Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

SAFETY CHECK

Care should be taken while servicing this color monitor because of the high voltage used in the deflection circuits. These voltages are explosed in such areas as the associated flyback and yoke circuits.

FIRE & SHOCK HAZARD

- An isolation transformer must be inserted between the color monitor and AC power line before servicing the chassis.
- In servicing, attention must be paid to the original lead dress especially in the high voltage circuit.
  If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
- All the protective devices must be reinstalled per original design.
- Soldering must be inspected for the cold solder joints, frayed leads, damaged insulation, solder splashes or the sharp points. Be sure to remove all foreign materials.

IMPLOSION PROTECTION

All used display tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only same type display tubes.

X-RADIATION

The only potential source of X-Radiation is the picture tube. However, when the high voltage circuitry is operating properly there is no possibility of an X-Radiation problem. The basic precaution which must be exercised is to keep the high voltage at the factory-recommended level: the nominal high voltage is 25KV and must not exceed 30KV at zero beam current at rated voltage. The following steps describe how to measure the high voltage and how to prevent X-radiation.

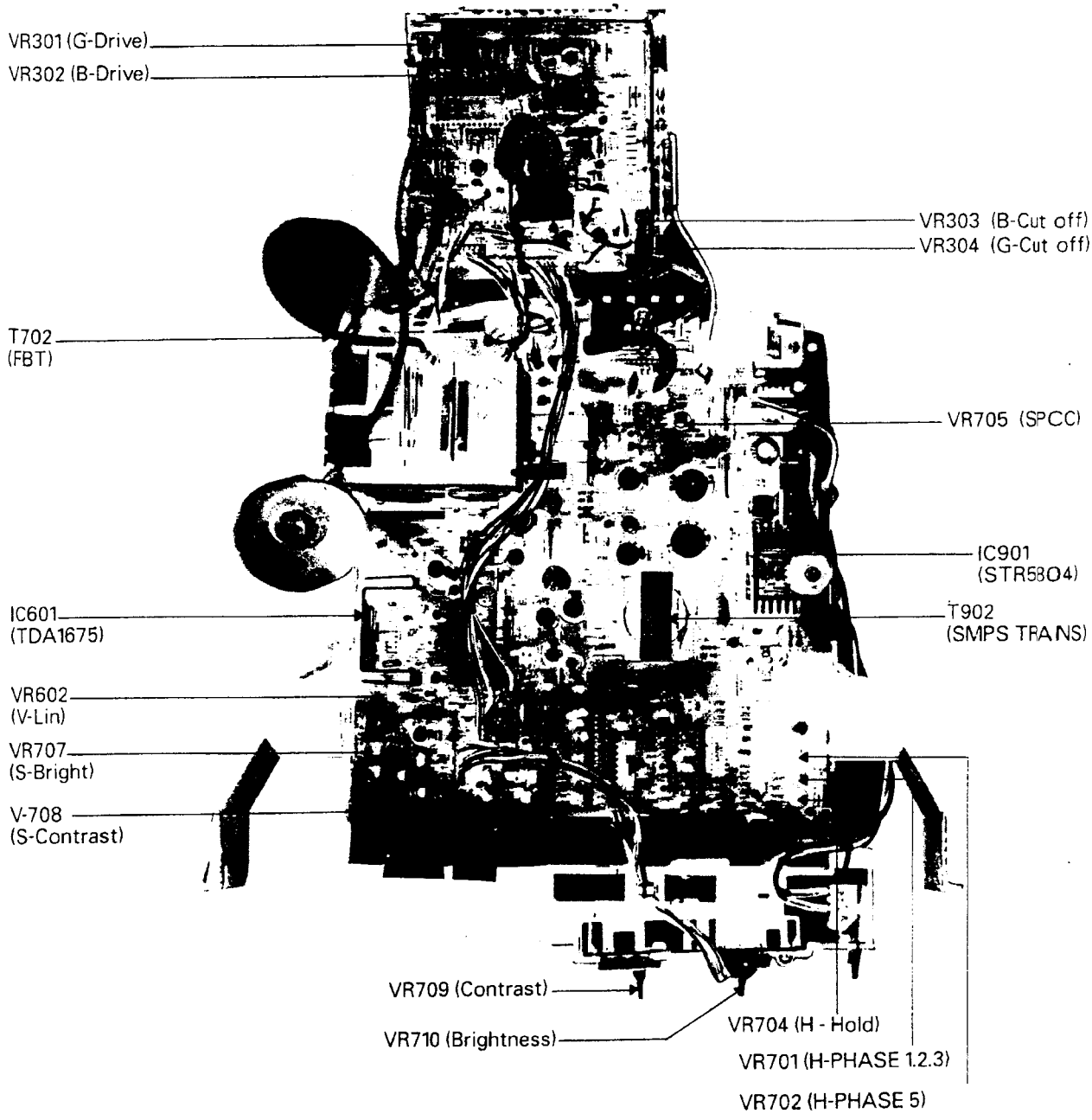
Note: It is important to use an accurate high voltage meter calibrated periodically.

- To measure the high voltage, use a high impedance high voltage meter, Connect (-) to chassis and (+) to the CRT anode button.
- Turn the brightness control fully clockwise.
- Measure the high Voltage. The high voltage meter should indicate at the factory-recommended level.
- If the upper meter indication exceeds the maximum level, immediate service is required to prevent the possibility of premature component failure.
- To prevent X-Radiation possibility, it is essential to use the specified picture tube.

CAUTION:
Please use only plastic screwdriver for shock protection during service operation.

2. CIRCUIT DESCRIPTION

2.1. LOCATION OF CONTROL PARTS



2.2. CIRCUIT DESCRIPTION

POWER SUPPLY

The power supply is a SMPS (Switching Mode Power Supply) that consists of switching IC(IC901), SMPS transformer (T902) and pulse transformer (T901), over current protection transistor (Q901) and the associated components.

POWER SUPPLY DESCRIPTIONS

This SMPS (Switching Mode Power Supply) is operate to obtains retified DC103V, 90V, 65V, 18V, 12V, -6.3V from AC 120V, 60Hz (USA version)/AC220-240V, 50Hz (Europe Version).

The power is supplied in the following procedure:

1) Applied input power, AC120V/AC220-240V, is rectified by Bridge rectifier diode D901.
2) Rectified DC voltage is applied to T902 (pin No. 8 through No. 6) and IC901 (pin No. 2).
3) IC901 is starting ON/OFF switching.
4) This oscillation is generating switching pulses in the primary turn of SMPS transformer (T902).
   Therefore switching pulses are generated in the secondary turn which are proportion to the secondary turn Ratio.
5) Generated pulses are rectified by secondary rectifier diode D907,908,909,910,911,912.

HORIZONTAL AFC AND OSCILLATION LIMITTER

The AFC circuit consists of phase detection circuit and the associated components. The oscillation limit circuit is necessary to prevent the pulse from excessive high voltage. This circuit is located in IC701 and controls the oscillator to maintain correct frequency.

HORIZONTAL DRIVE CIRCUIT

To obtain horizontal drive pulses from IC701 PIN 12, the horizontal oscillator must be working.

Horizontal drive pulses from IC701 PIN 12 are applied to transistor Q707.

The B+ for T701 is supplied from the 12V line.

HORIZONTAL OUTPUT CIRCUIT

Horizontal drive pulses from IC701 pin 12 are coupled to the base of horizontal output transistor Q713.

When Q713 is ON, the current is flow from B+ through the primary turn of FBT (T702) to collector of Q713.

At the same time horizontal deflection current is flow from C726 through horizontal yoke coil to GND.

During retrace time transistor Q713 is off. At the monent R.C oscillation that is charged energy in the FBT and horizontal deflection coil discharge to C725 and C724 is occurred.

Therefore generated high voltage pulses are applied to collector of Q713 and primary turn of the FBT (T702).

As a result, high voltage pulses are generated in the secondary turn of FBT proportion to secondary turn ration.

Under normal operating condition, the FBT B+ is as follows.

- 90V for VGA 1,2,3, mode
- 103V for E-VGA, 8514/A mode.

MODE CONTROL CIRCUIT

Mode control circuit is consist of IC201 and associatec components.

This IC compare to frequency and polarity of inpu signal.

The comparison table which is input signal VS outpu signal is as follows.

Input VS output Comparison list

	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 11	PIN 12
VGA 1	5V	0V	0V	0V	0V	5V		
VGA 2	0V	5V	0V	0V	0V	5V		
VGA 3	0V	0V	5V	0V	0V	5V		
8514A	0V	0V	0V	5V	0V	0V		
E-VGA	0V	0V	0V	0V	5V	0V		

VERTICAL DEFLECTION CIRCUIT

IC601 include vertical drive and output circuits.

The time constant of C605, R617 which are connectec to pin 3,4,6, of IC601 determine vertical oscillatior frequency.

Vertical size control circuit consist of pin 7 of IC601 anc associated components. That are Q602, 603, 604, 607 611, 612.

V-Size control method is current control which is flov through pin 7.

Vertical linearity circuit consist of VR602, C606,607 R615.

The pin 1 of IC601 is vertical output pin and connectec to vertical deflection yoke.

At this point, vertical center is controlled by DC voltage control.

Vertical center circuit consist of Q609, 610 anc associated components.

X-RAY PROTECTION CIRCUIT

The X-Ray protection circuit consists of D913, D914 Q904,Q906,R920,R921,R926,C932,C933 and associatec components.

The voltage from FBT pin 5 is rectified by D914.

Under normal operating condition, The voltage of TP maintain specified value (DC 24.5 ± 1V).

If malfunction causes excessively high voltage, the voltage of FBT pin 5 and TP1 will be increase.

As a result, D913 is conducted and transistor Q904 is ON.

If a voltage is applied to the gate of SCR Q906, 103V line which is connected to the anode of SCR Q906 is short.

As a result, overload power protection circuit which is consists of Q901 and associated components will be operating.

CAUTION:

If overload power protection circuit were operated, you should power switch OFF and after 11 seconds powe switch ON.

Unless power off time is enough, the power is not turned ON

3. ADJUSTMENT

3.1. GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the monitor leaves the factory.

Therefore the monitor should operate normally and produce proper color and pictures upon installation.

However, several minor adjustments may be required depending on the particular location in which the monitor is to operate. This monitor is shipped completely in carton. Carefully draw out the monitor from the carton and remove all packing materials.

Check and adjust all the customer controls such as Brightness and Contrast to obtain a normal picture.

3.2. AUTOMATIC DEGAUSSING

A degaussing coil mounted around the picture tube so that external degaussing is normally unnecessary after moving the monitor. The monitor should be properly degaussed upon installation.

If the set is moved or faced in a different direction, the power switch must be switched off for at least 30 minutes in order that the automatic degaussing circuit operates properly.

When the chassis or parts of the cabinet become magnetized, cause pocr color purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the monitor, and slowly withdraw the coil to a distance of about 2 meters before disconnecting it from the AC source. If color shading still persists, perform the convergence adjustment procedures, as mentioned later.

3.3. HORIZONTAL HOLD ADJUSTMENT

3.3.1. Disconnect the signal cable of monitor from signal source (PC).

3.3.2. Connect the ground terminal of a frequency counter to chassis ground of monitor and the other terminal to RED colored wire of DY connector.

3.3.3. Adjust VR704 (H.HOLD), so that the horizontal frequency is 35.35 KHz +/- 50Hz.

3.4. H-RASTER CENTER ADJUSTMENT

3.4.1. Display the 8514/A crosshatch pattern on the monitor.

3.4.2. Adjust VR711, so that the raster position is mechanical center.

3.5. VERTICAL LINEARITY ADJUSTMENT

3.5.1. Display the MODE 3 crosshatch pattern on the monitor.

3.5.2. Adjust VR602, so that the vertical linearity should be best condition.

3.6. VERTICAL SIZE ADJUSTMENT

3.6.1. Adjust V.Size control (VR603), so that the vertical size of image is 186 +/- 1 mm at MODE 4 (8514/A) crosshatch pattern.

3.6.2. Check the vertical size of image for each mode. VGA 1,2,3, EVGA (800 x 600) mode: 184 +/- 5 mm. 8514/A mode : 184 +/- 5 mm.

3.7. SIDE PINCUSHION ADJUSTMENT

3.7.1. Display the crosshatch pattern at VGA MODE3.

3.7.2. Adjust VR705(S.PCC), so that minimize the side pincushion distortion.

3.8. H-POSITION ADJUSTMENT

3.8.1. Display the crosshatch pattern at 8514/A mode.

3.8.2. Adjust the H.POSITION control VR(VR703), so that the image is mechanical horizontal center position.

3.8.3. Display the crosshatch pattern at VGA MODE3.

3.8.4. Adjust the H.PHASE VR(VR701), so that the image is mechanical horizontal center position.

3.8.5. Display the crosshatch pattern at EVGA mode.

3.8.6. Adjust the H.PHASE VR(VR702), so that the image is mechanical horizontal center position.

3.9. H-SIZE ADJUSTMENT

3.9.1. Adjust the H.SIZE VR(VR706), so that the horizontal size is 245 +/- 1.5 mm at VGA MODE 2 crosshatch pattern.

3.9.2. Check the horizontal size of image for all mode. VGA MODE 1,2,3, EVGA(800 x 600), 8514/A mode : 245 +/- 3 mm.

3.10. WHITE BALANCE ADJUSTMENT

3.10.1. Following instruments should be prepared to adjust
WHITE BALANCE and CONTRAST.
- White Balance Meter.
- External Degaussing Coil.
- Optical Photo Meter.

3.10.2. Display the pattern color 0,0 (back raster only) at VGA MODE 3.

3.10.3. Set the external BRIGHT VR, CONTRAST VR and SUB-BRIGHT VR (VR707) to max position.

3.10.4. Set the B cut-off VR(VR303) and G cut-off VR (VR304) to minimum position.

3.10.5. Adjust the SCREEN VR of FBT to the point that luminance of back-raster is about 0.3 FL.

3.10.6. Adjust G cut-off (VR304) and B cut-off (VR303), so that X-0.282, Y-0.304.

3.10.7. Adjust SUB-BRIGHT VR(VR707), so that the luminance of back-raster is about 0.8 FL.

3.10.8. Display the window pattern (70 mm x 70 mm) of color 15,0(intensity full white) at VGA MODE 3.

3.10.9 Set the BRIGHT VR and SUB-CONTRAST VR (VR708) to mechanical center position.

3.10.10. Turn the B-DRIVE (VR302), so that X is 0.282 and the G-DRIVE (VR301), so that Y is 304.

3.10.11. Repeat 8-10 until X-0.282 +/- 0.02 and Y-0.304 +/- 0.022.

3.10.12. Set BRIGHT VR to minimum and adjust CON TRAST VR until luminance is 5 FL at full whit pattern (color 15,0).

3.10.13. Confirm X-0.282 +/- 0.02, Y-0.304 +/- 0.022, if the color coordinate is out of specification, readjust G,B cut-off VR, so that the screen is white.

3.10.14. Repeat 10-10, 10-11. 10-12, so that the screen should be white.

3.11. CONTRAST ADJUSTMENT

3.11.1. Display the windown pattern (70 mm x 70 mm) of color 7,0 at VGA MODE 3.

3.11.2. Set the BRIGHT VR and CONTRAST VR to the maximum position.

3.11.3. Adjust the SUB-CONTRAST VR (VR708) to the following point.
* MEDIUM PERSISTENCE CDT : 25 FL
* MEDIUM SHORT PERSISTENCE CDT : 30 FL.

3.12. FOCUS ADJUSTMENT

3.12.1. Set the BRIGHT VR and CONTRAST VR to the MAX position.

3.12.2. Display "H" character pattern (color 7,0) in full screen.

3.12.3. Adjust FOCUS VR OF FBT, so that the focus should be best condition.

3.13. CONFIRMMING SELF-TEST

3.13.1. Set the BRIGHT VR and CONTRAST VR to the MAX position.

3.13.2. Remove the signal connector from the signal source (PC)

3.13.3. Confirm that the luminance of the self-raster screen is more than 5 FL.

3.14. FAIL SAFETY ADJUSTMENT

3.14.1. Set the BRIGHT VR and CONTRAST VR to the MIN. position.

3.14.2. Display the crosshatch pattern at VGA MODE 3.

3.14.3. Confirm that voltage of FBT pin #2 is 90V +/- 1V.

3.14.4. Check the TP1 voltage should be 24.5 V +/- 1V.

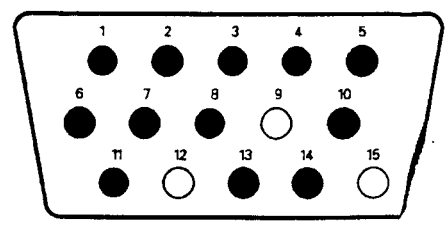
3.14.5. Apply the 30V by external DC voltage regulator to TP 1.

3.14.6. Confirm the SMPS power is OFF.

3.14.7. If the power is off, then the power switch should be turned off.

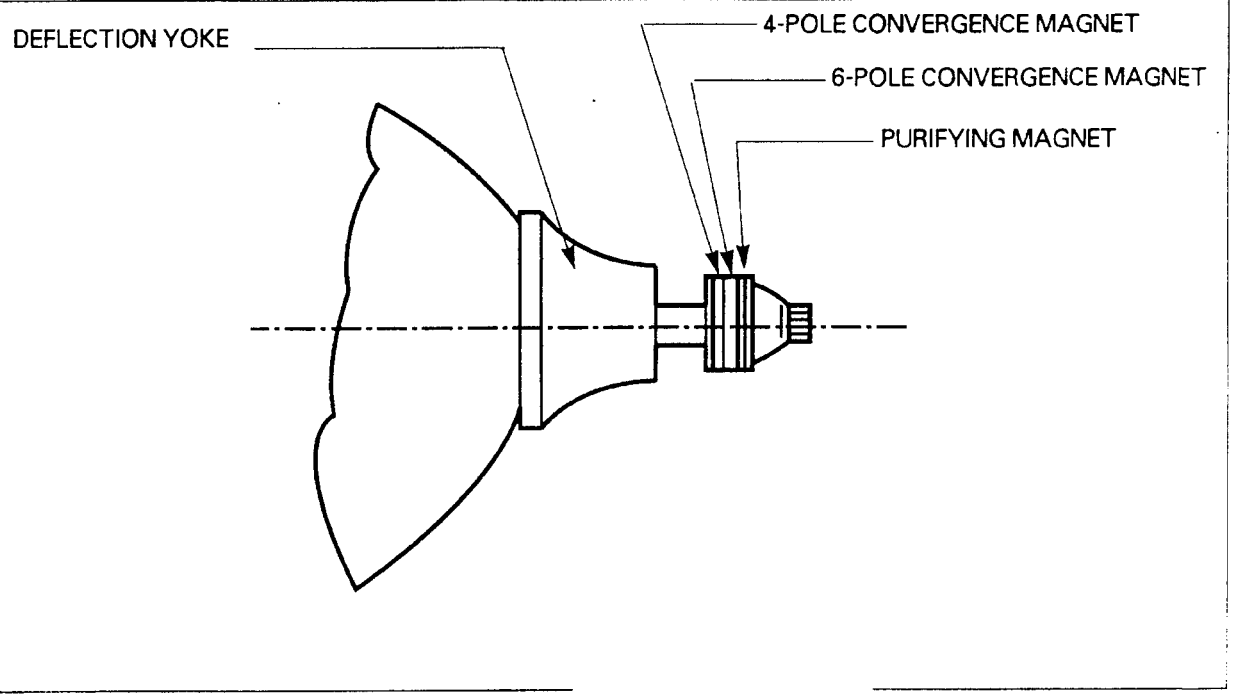
3.14.8. After 11 seconds, turn on the POWER SWITCH again.

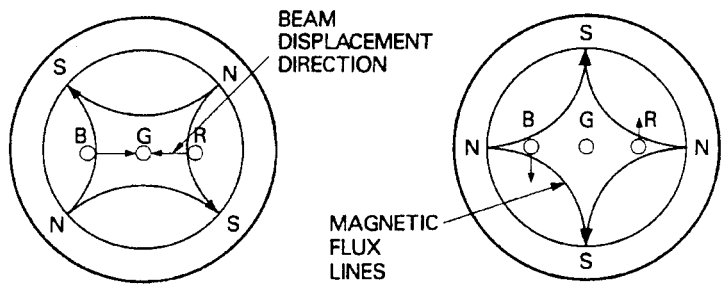
3.15. PIN CONNECTOR (MALE) TO THE COMPUTER



1. Red	6. Red GND	11. ID 0 (GND)
2. Green	7. Green GND	12. ID 1 (No Pin)
3. Blue	8. Blue GND	13. H-Sync
4. ID 2 (GND)	9. No Pin	14. V-Sync
5. Self Test	10. Digital GND	15. No Pin

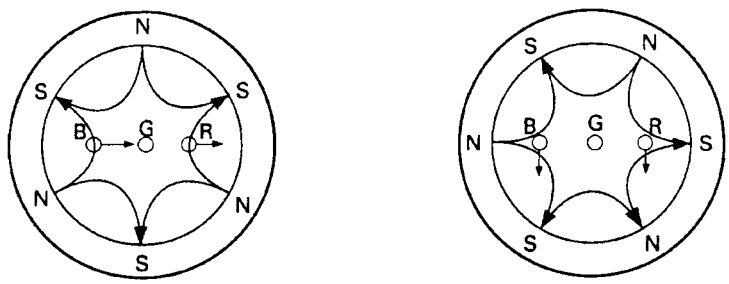
3.16. STATIC CONVERGENCE SYSTEM





4-POLE FIELD

Beam Motion Produced by the six-pole and four-pole Convergence Manget.



6-POLE FIELD

Figure 3. Static Convergence System

3.17. GEOMETRIC MEASURMENTS

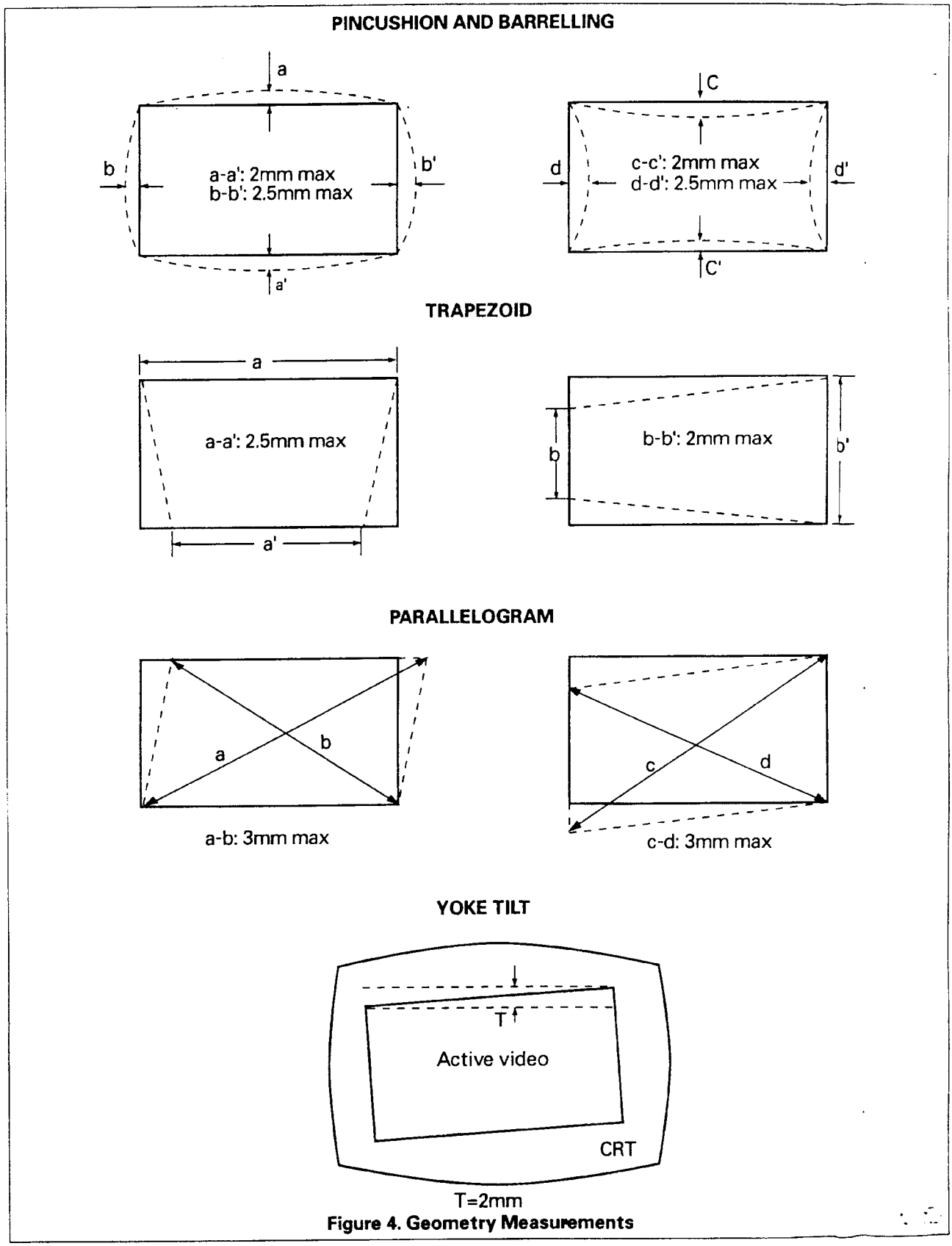


Figure 4. Geometry Measurements

4. DESCRIPTION OF BLOCK DIAGRAM

1. SMPS

First of all if you push on the power switch, the line voltage is applied to the rectifier diode (D901) and rectified voltage is applied to the primary coil of trans.
Depending on turn ratio of the transformer, the secondary voltage appears at the secondary coil.
And it is rectified by each diode.
The output voltage are as follows;
DC 103V, 90V, 65V, 18V, 12V, -6.3V.

2. MODE CONTROL

Display modes are detected by horizontal and vertical sync signal, and the mode signals control the vertical and horizontal processing ICs.

3. VER. DRV & OUT

The vertical sync signal with 56Hz/60Hz/70Hz/87Hz/TTL level from mode control IC is applied to vertical IC.
The output signal of the IC drives vertical deflection yoke.

4. HOR.DRIVE

The horizontal sync signal with 31.5 KHz/35.5KHz TTL level from mode control IC is applied
To horizontal IC, the output signal of the IC drives the H-OUT.

5. H-OUT

Switching transistor (Q713) drives horizontal deflection yoke and FBT with diode modulator.

6. B+ SELECTOR

The input voltage of FBT is changed by mode signal as follows:
31.5 KHz mode : 90V DC
35.5 KHz mode : 103V DC

7. X-RAY PROTECT

If the high voltage of FBT approximately reach to 29KV in abnormal state, the SMPS stops operating.
And all circuits stop operating.

8. VERT. BLANKING

This circuit is operated that vertical retrace line is not showen. Ouput signal of vertical. Blanking circuit is applied to G1 on CRT.

9. BRIGHT CONTROL

This circuit vary the brightness of the video screen by controlling the G1 voltage.

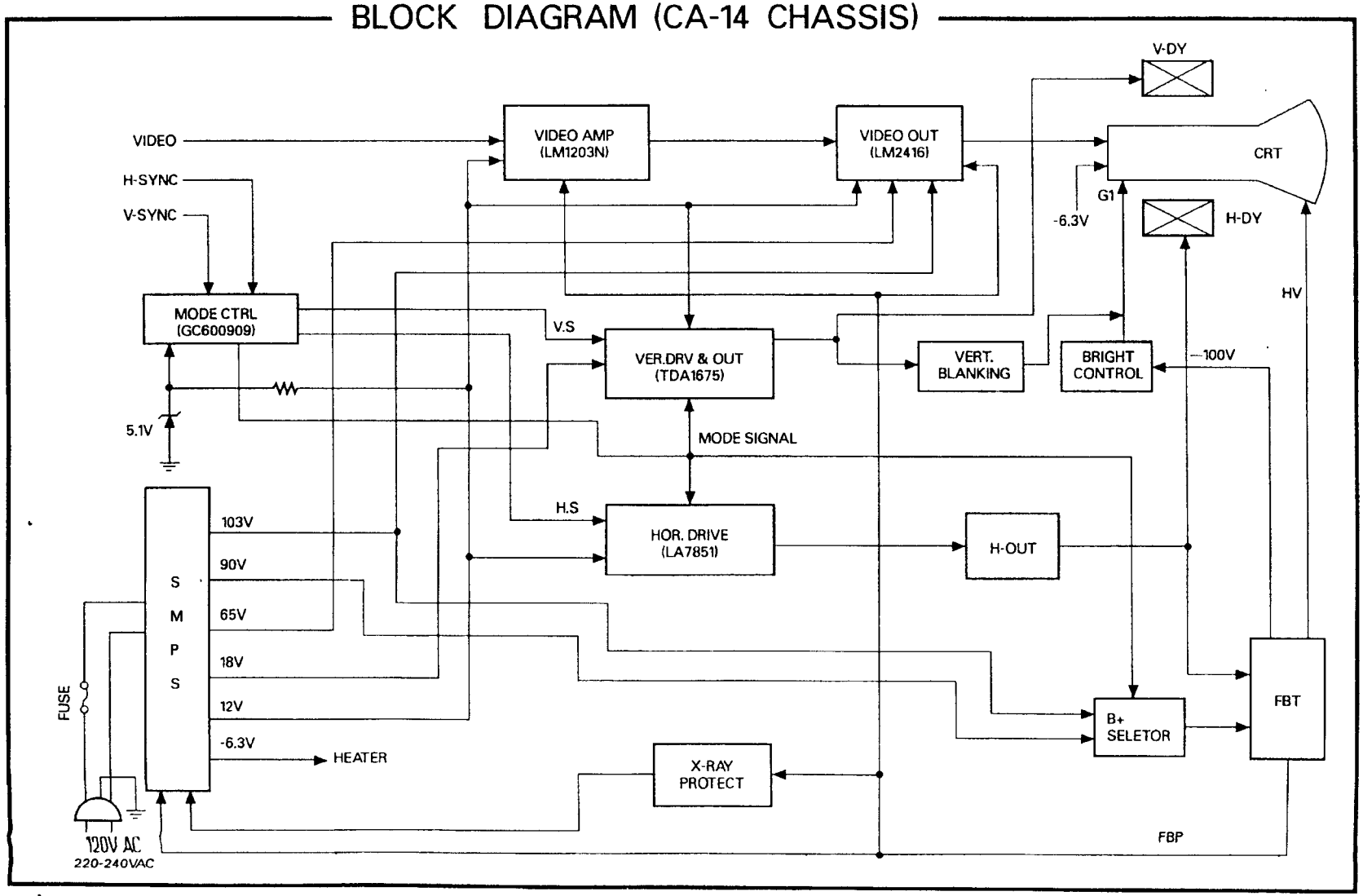
10. VIDEO AMP

The video signal from PC is amplified, and the amplified signal is sent to VIDEO OUT.
The VIDEO AMP contains self raster function. (when the cable is disconnected with PC)

11. VIDEO OUT

The video signal from the VIDEO AMP is amplified again, and applied to each cathode on CRT.

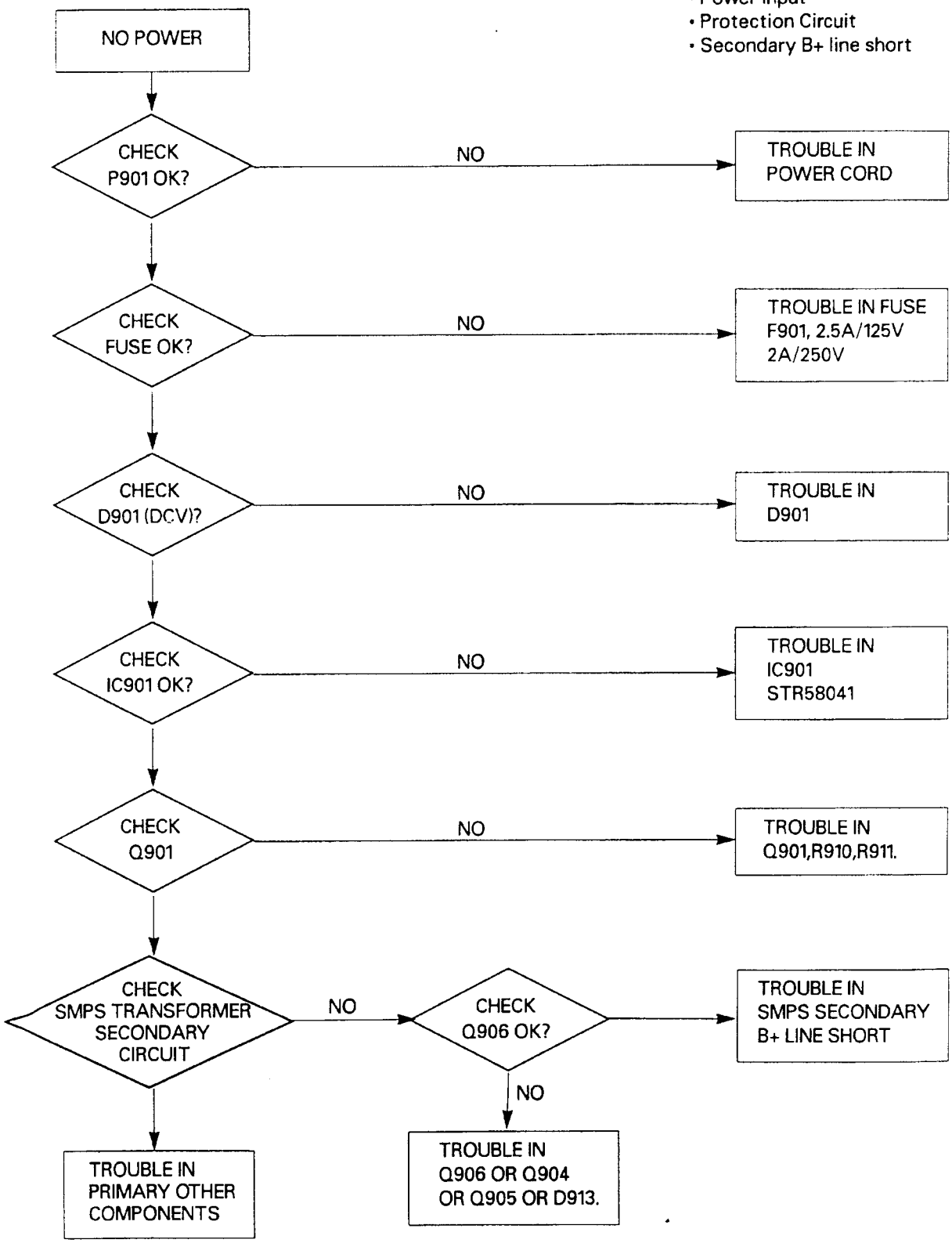
BLOCK DIAGRAM (CA-14 CHASSIS)



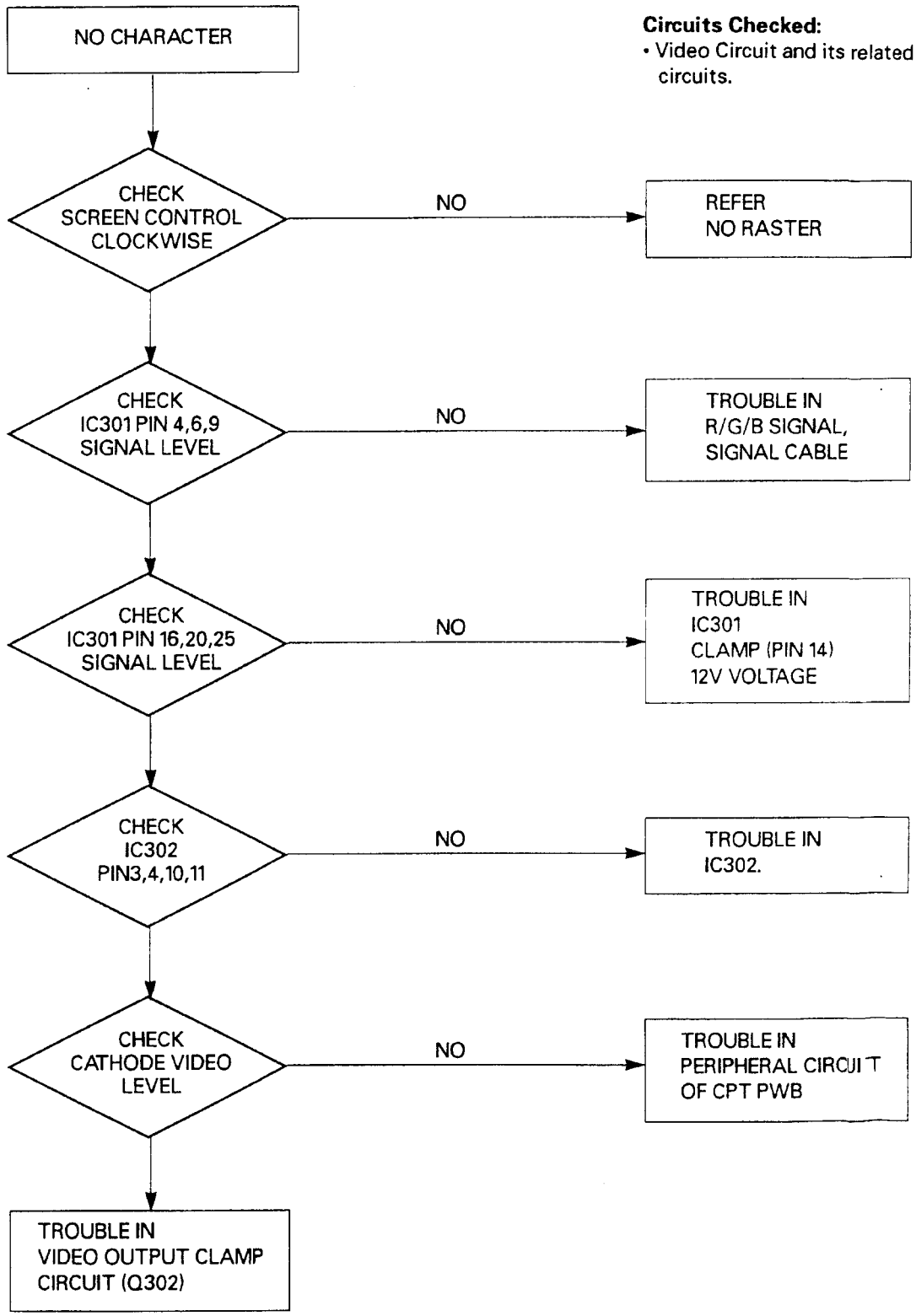
5. TROUBLE SHOOTING GUIDE

5.1. NO POWER

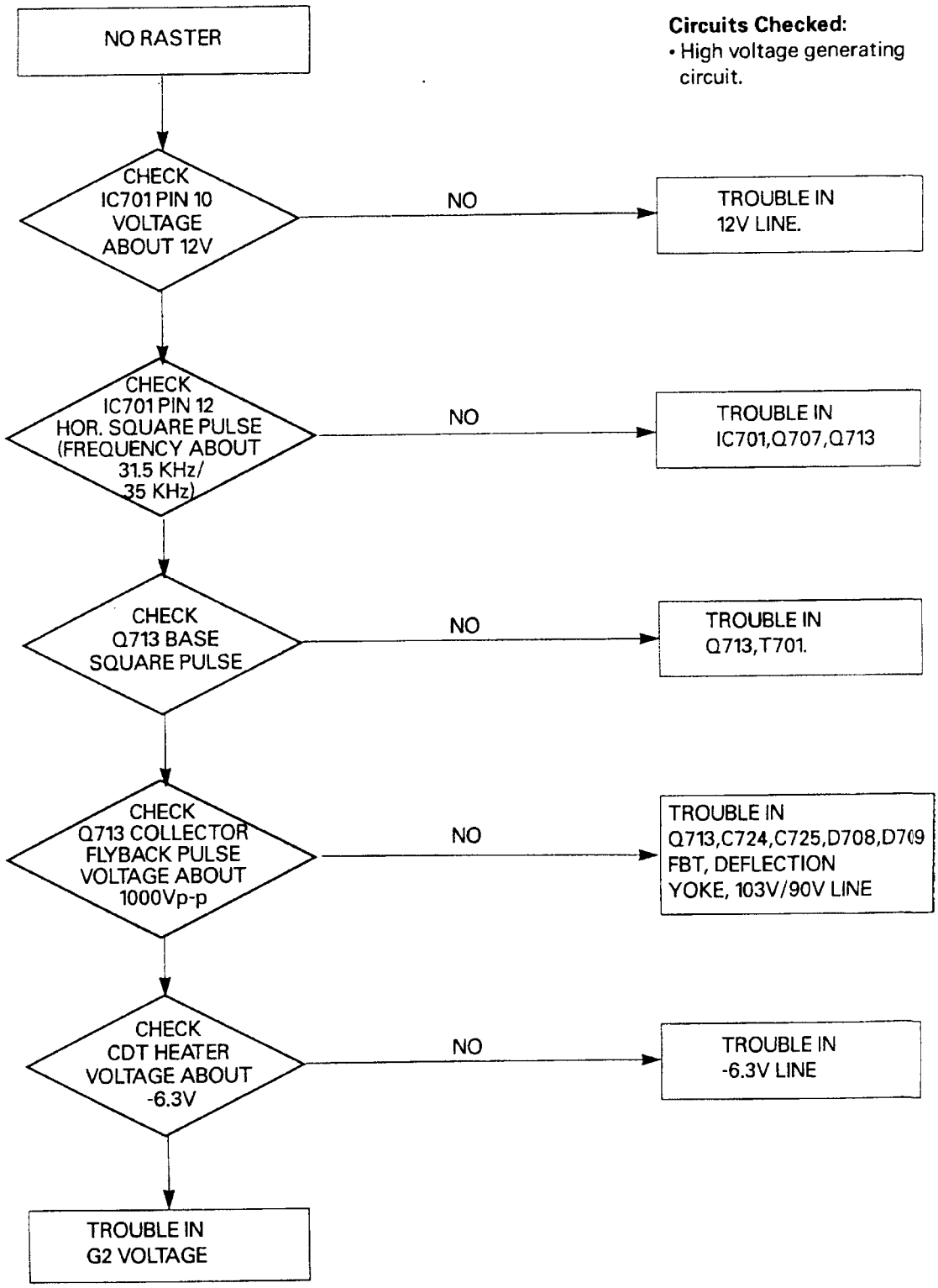
Circuits Checked:
- Power input
- Protection Circuit
- Secondary B+ line short



5.2 NO CHARACTER

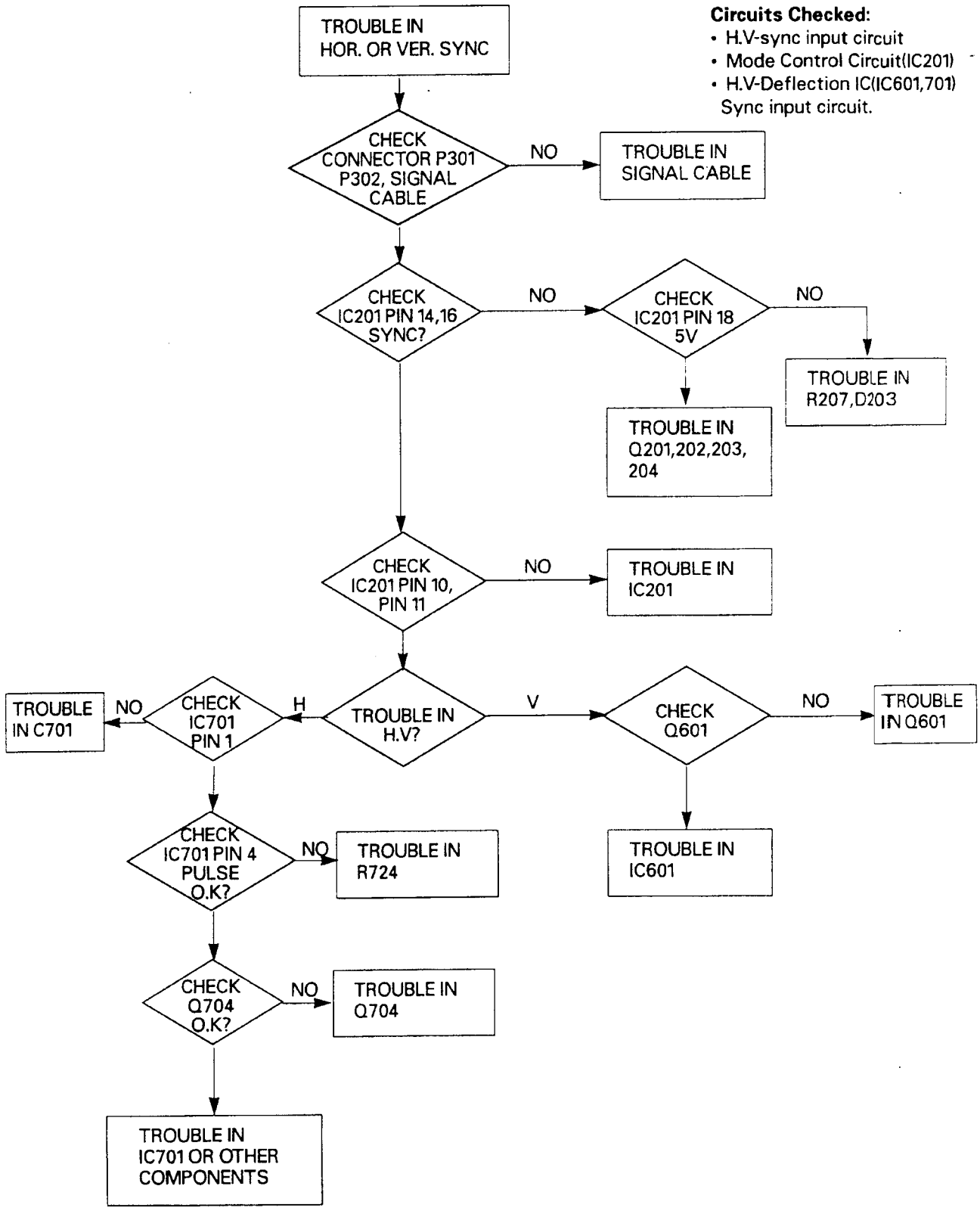


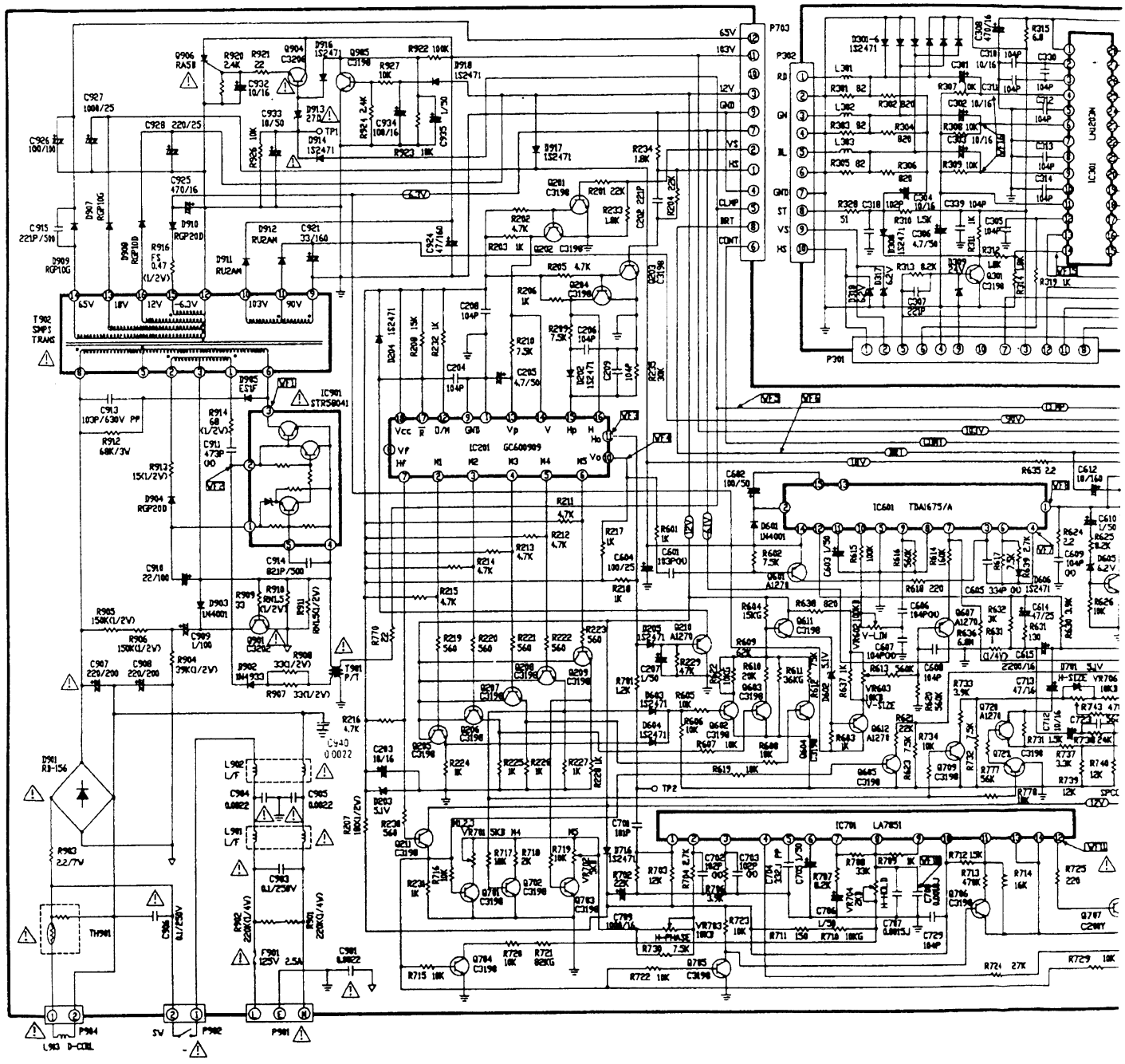
5.3 NO RASTER


NO RASTER
Circuits Checked:
• High voltage generating circuit.
CHECK IC701 PIN 10 VOLTAGE ABOUT 12V
NO
TROUBLE IN 12V LINE.
CHECK IC701 PIN 12 HOR. SQUARE PULSE (FREQUENCY ABOUT 31.5 KHz/ 35 KHz)
NO
TROUBLE IN IC701,Q707,Q713
CHECK Q713 BASE SQUARE PULSE
NO
TROUBLE IN Q713,T701.
CHECK Q713 COLLECTOR FLYBACK PULSE VOLTAGE ABOUT 1000Vp-p
NO
TROUBLE IN Q713,C724,C725,D708,D709 FBT, DEFLECTION YOKE, 103V/90V LINE
CHECK CDT HEATER VOLTAGE ABOUT -6.3V
NO
TROUBLE IN -6.3V LINE
TROUBLE IN G2 VOLTAGE

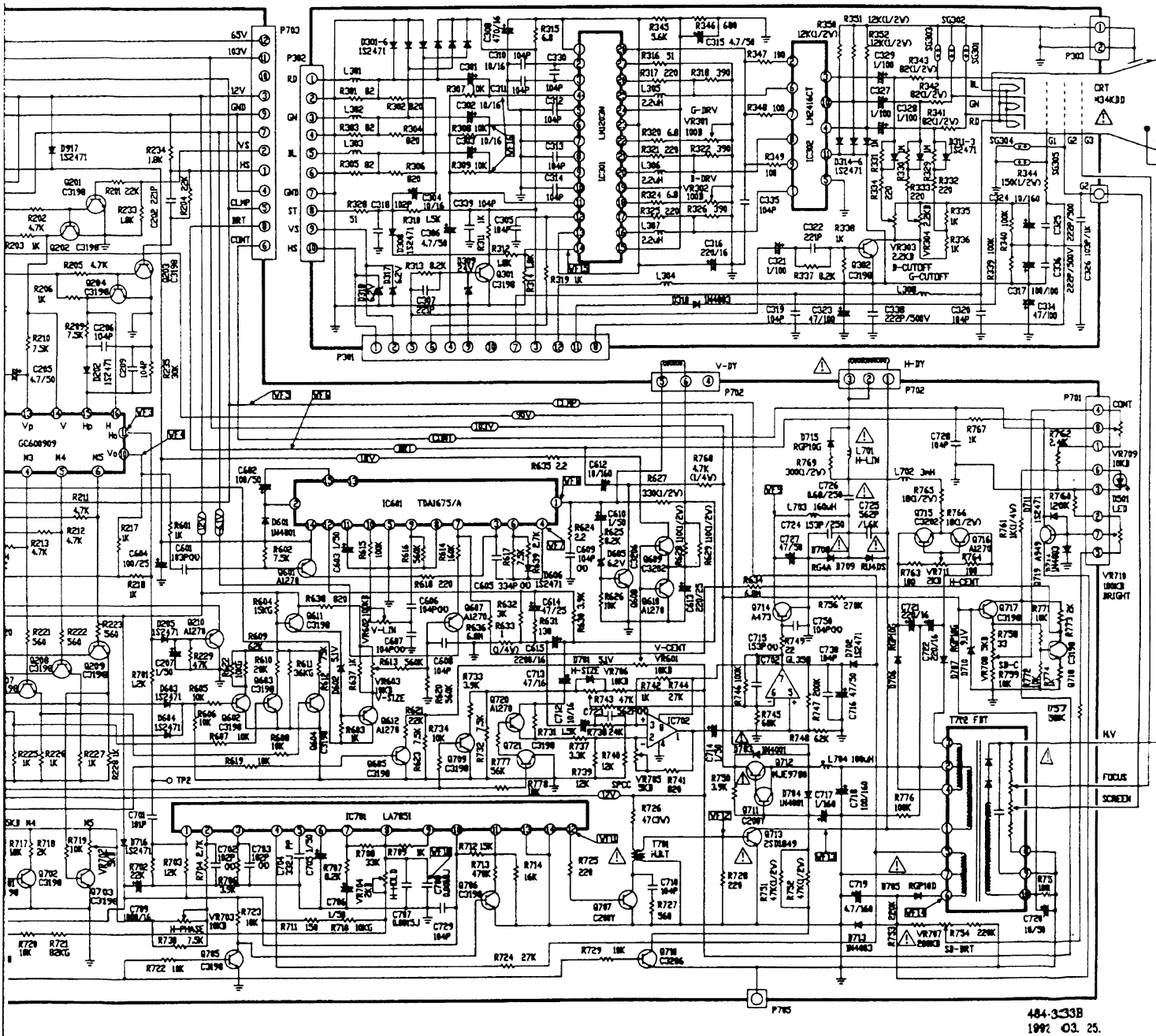
5.4 TROUBLE IN H.V SYNC

Circuits Checked:
- H.V-sync input circuit
- Mode Control Circuit(IC201)
- H.V-Deflection IC(IC601,701)
  Sync input circuit.

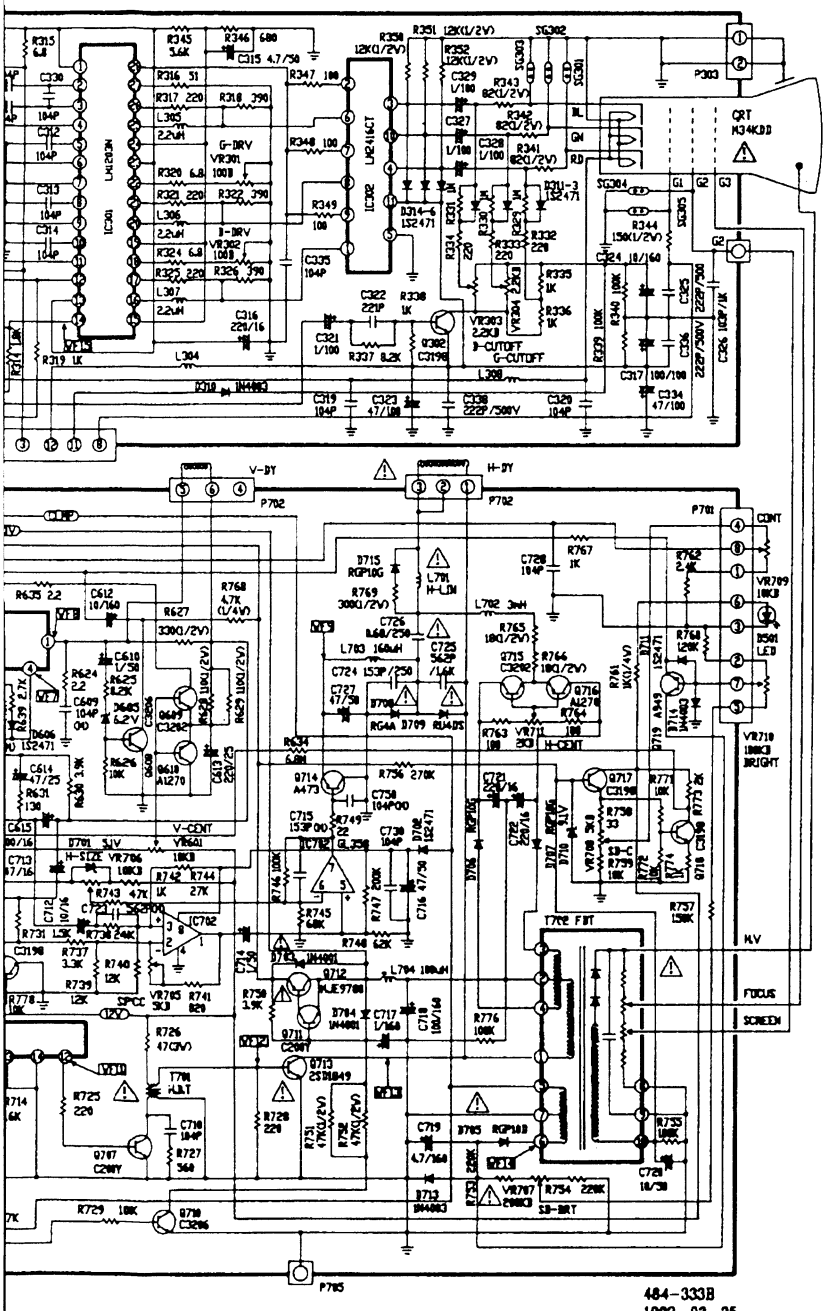




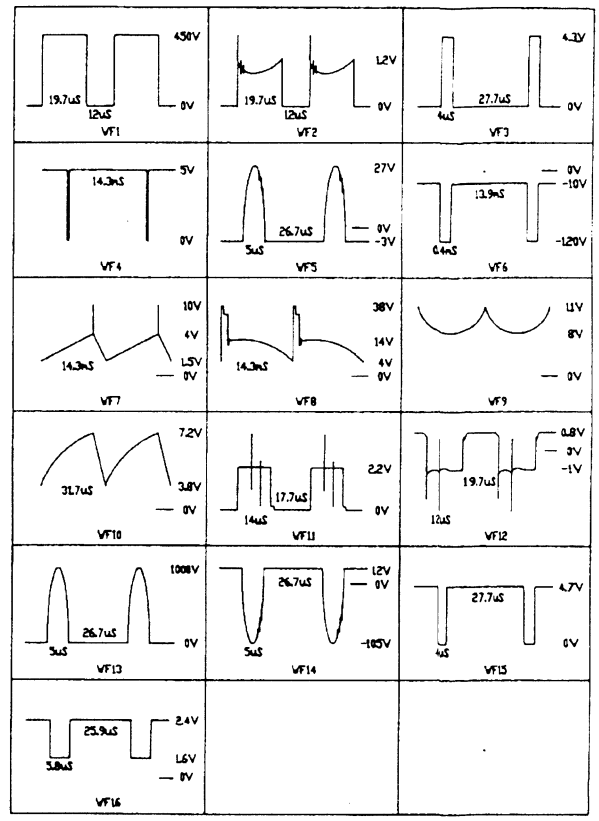
SCHEMATIC DIAGRAM (CQ430A/ 1460 PLUS 0.28 120V)



(CQ430A/ 1460 PLUS 0.28 120V)



484-333B
1992. 03. 25.



< VAVE FORM > : VGA MODE 2
FULL WHITE PATTERN

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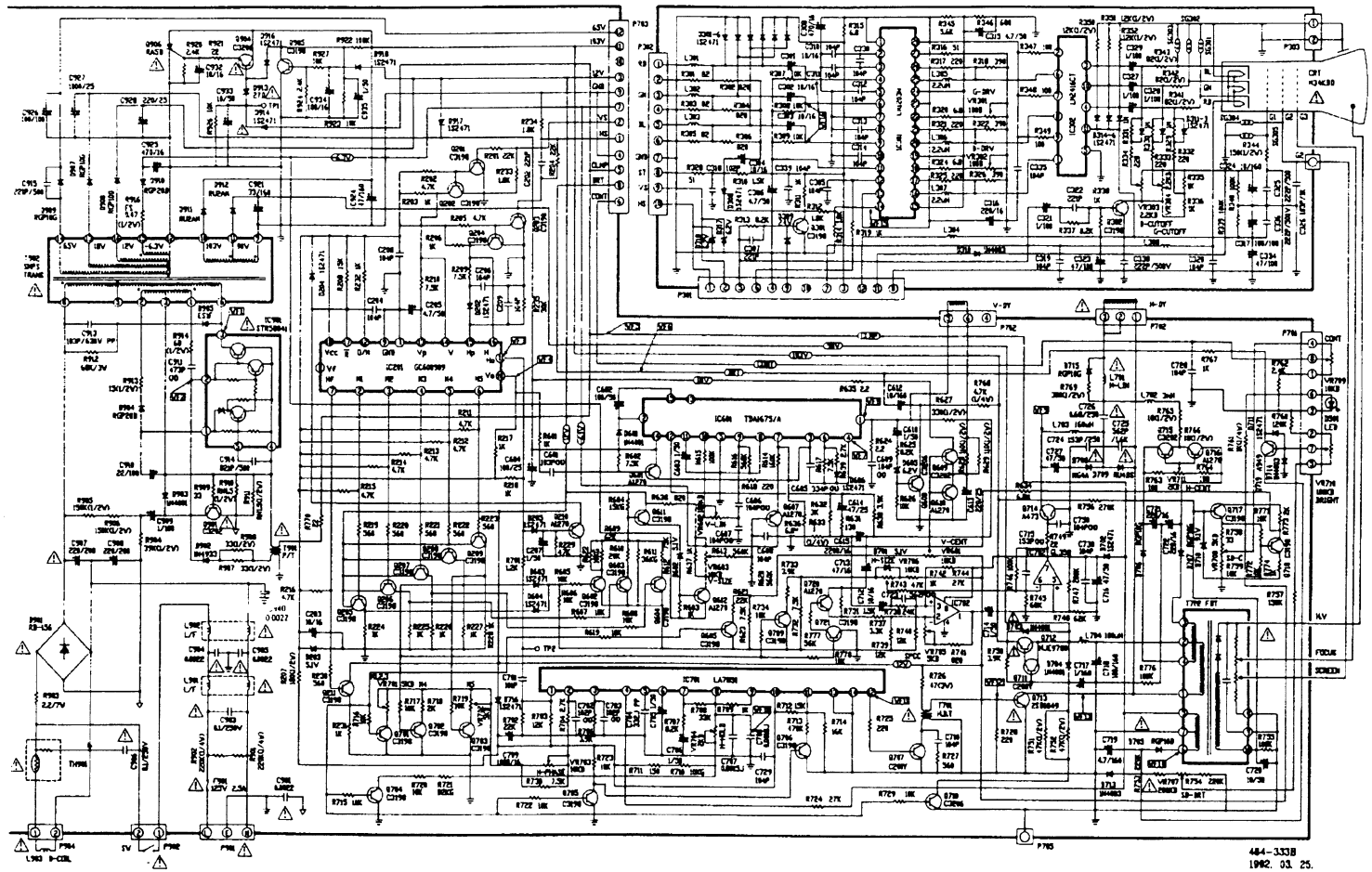
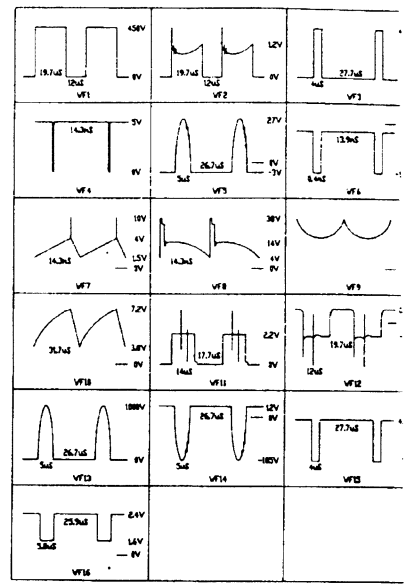


484-3338
1992. 03. 25.



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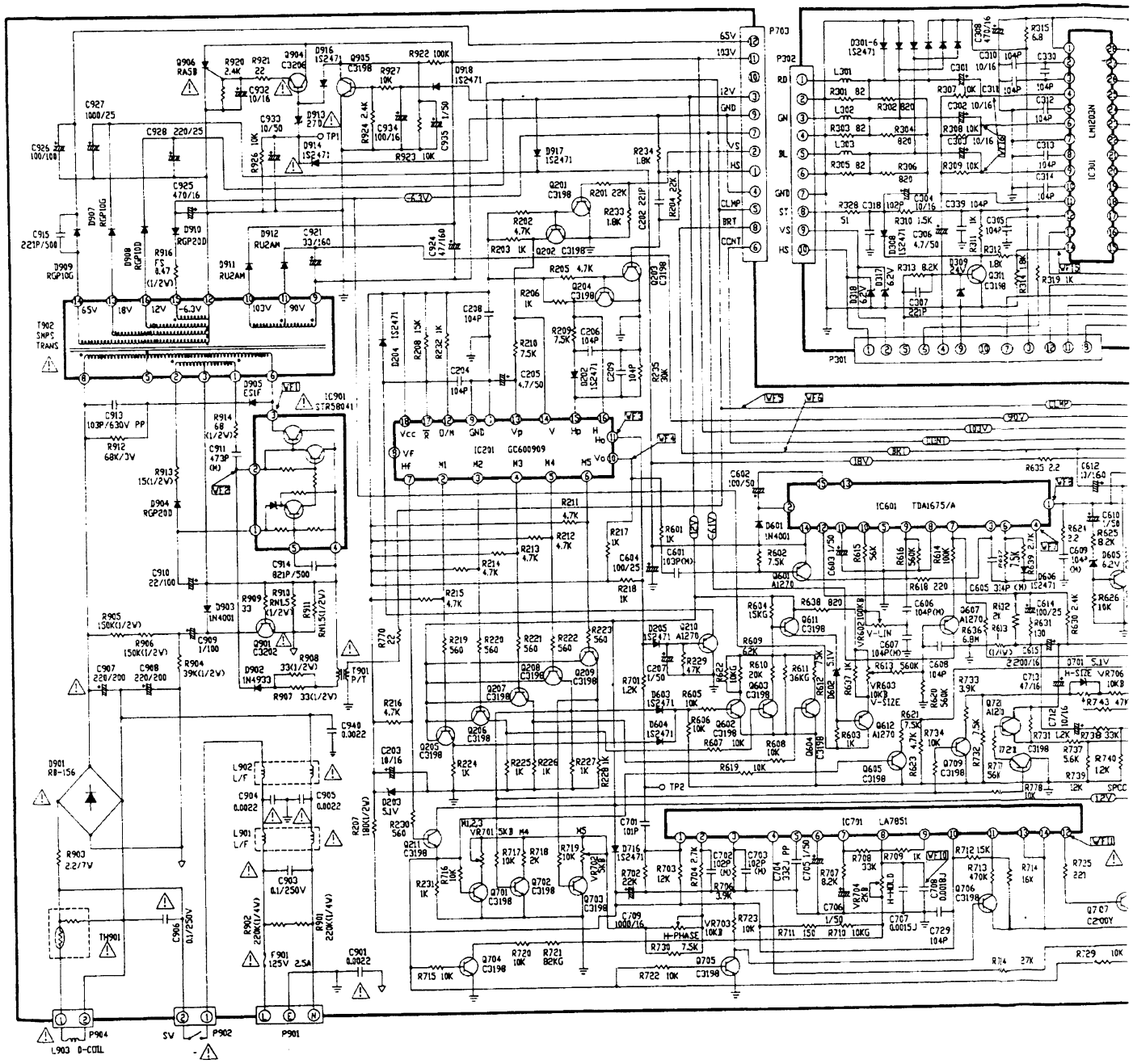

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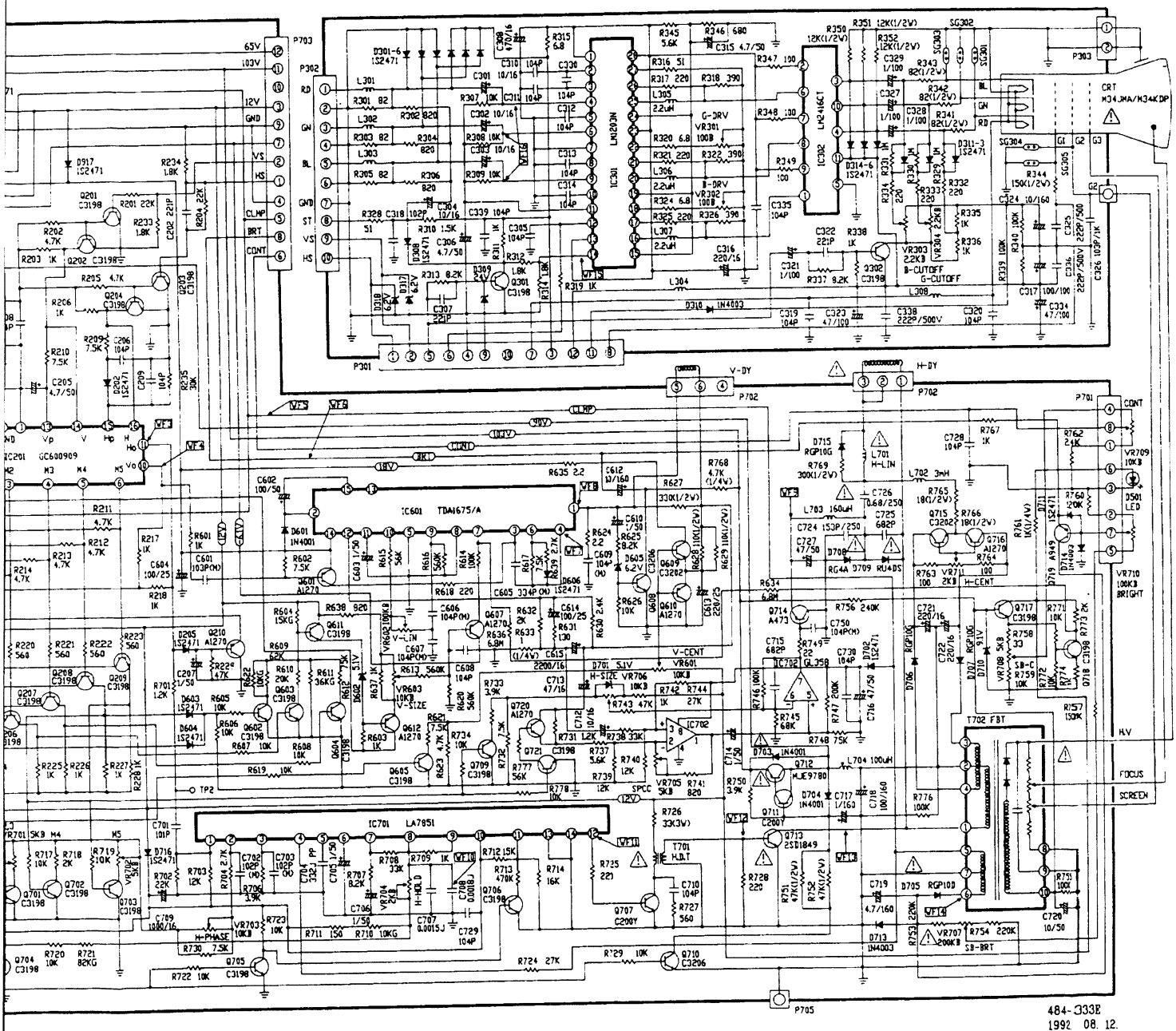
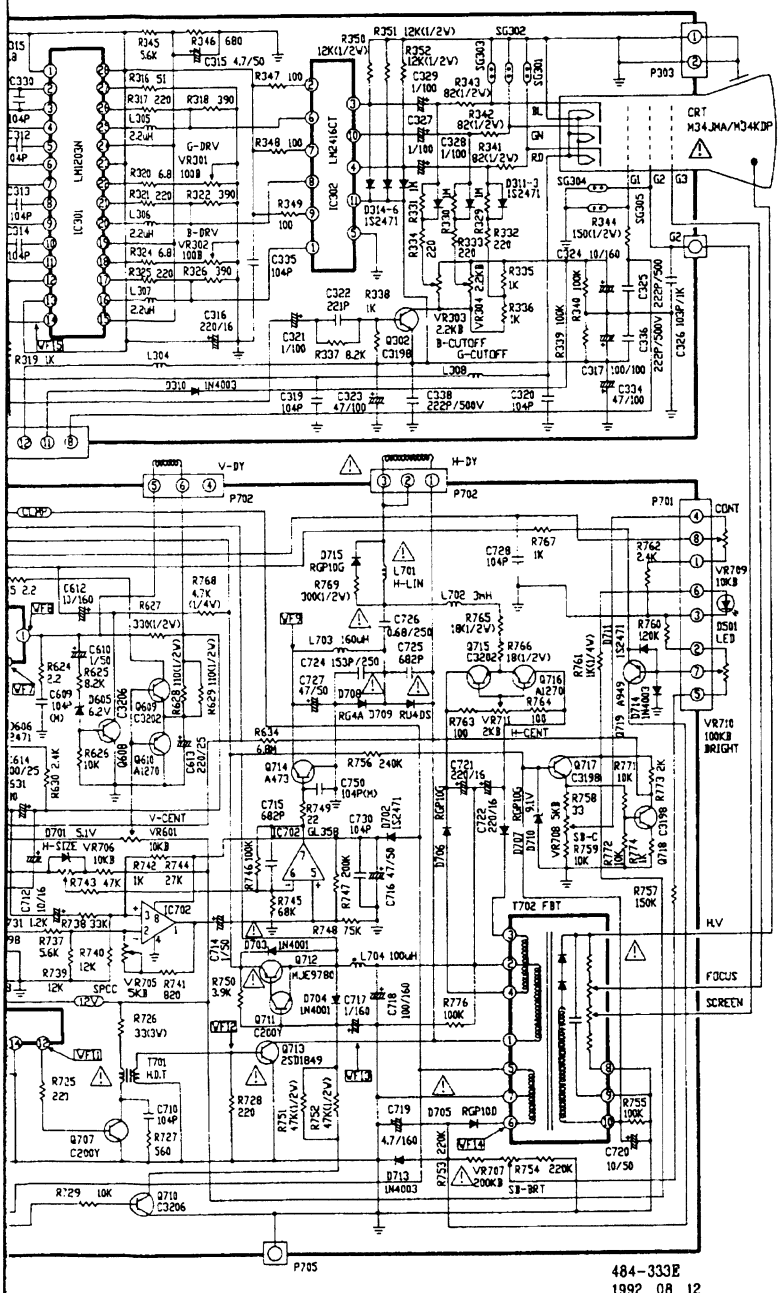


39 120V)



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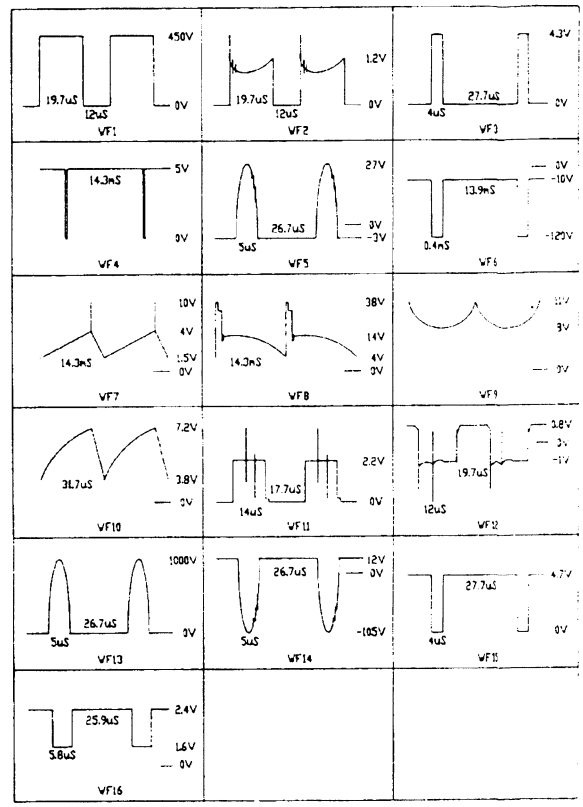
1992. 08. 12.



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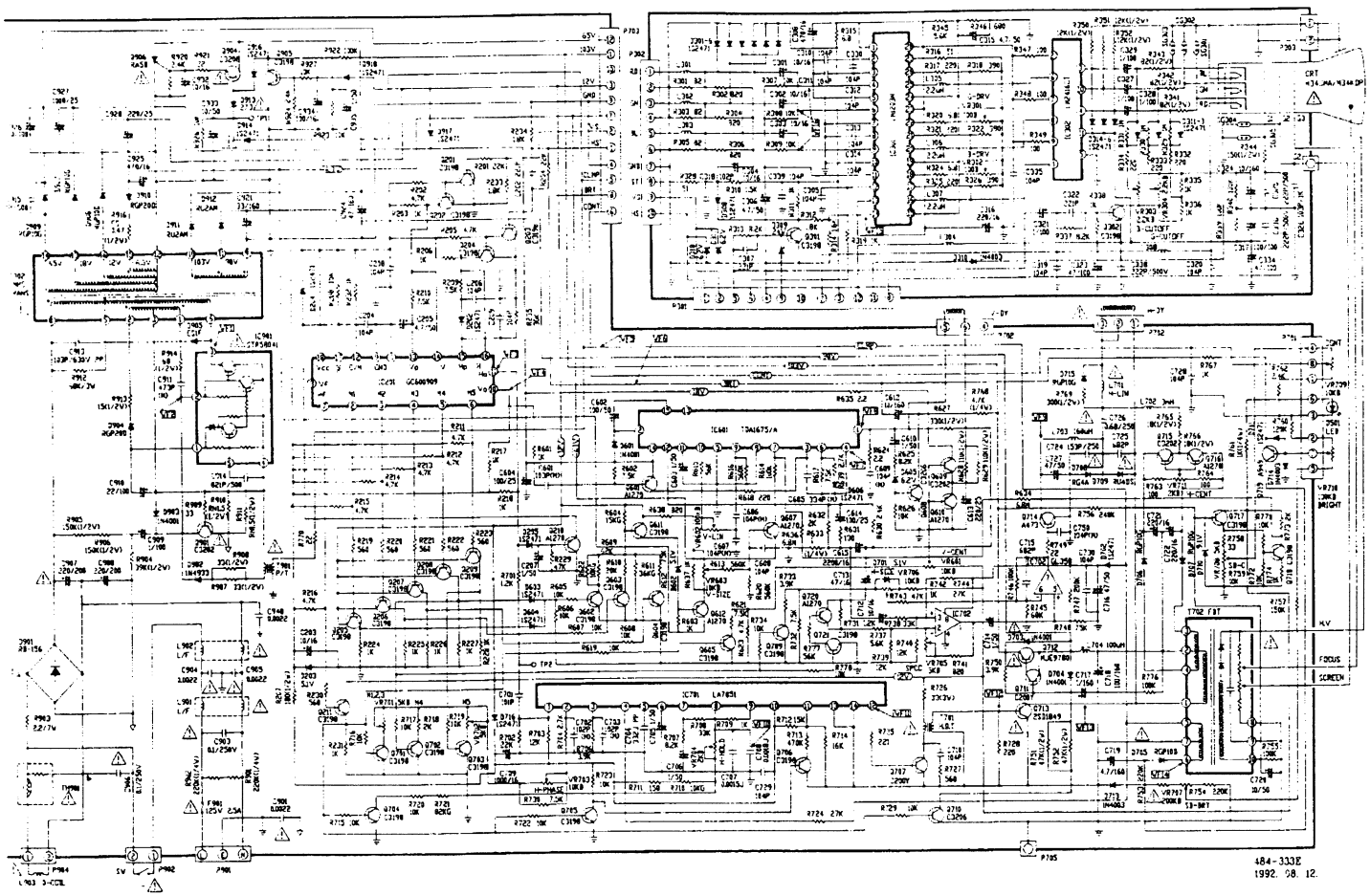

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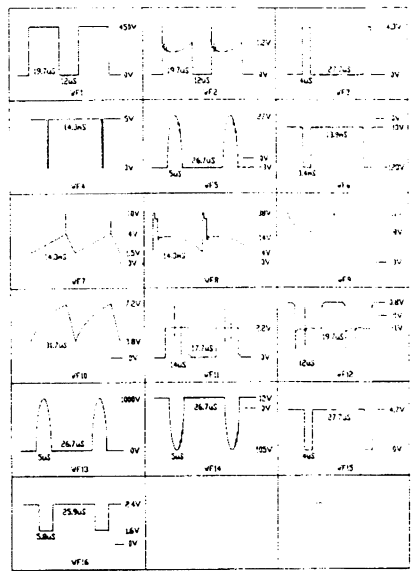

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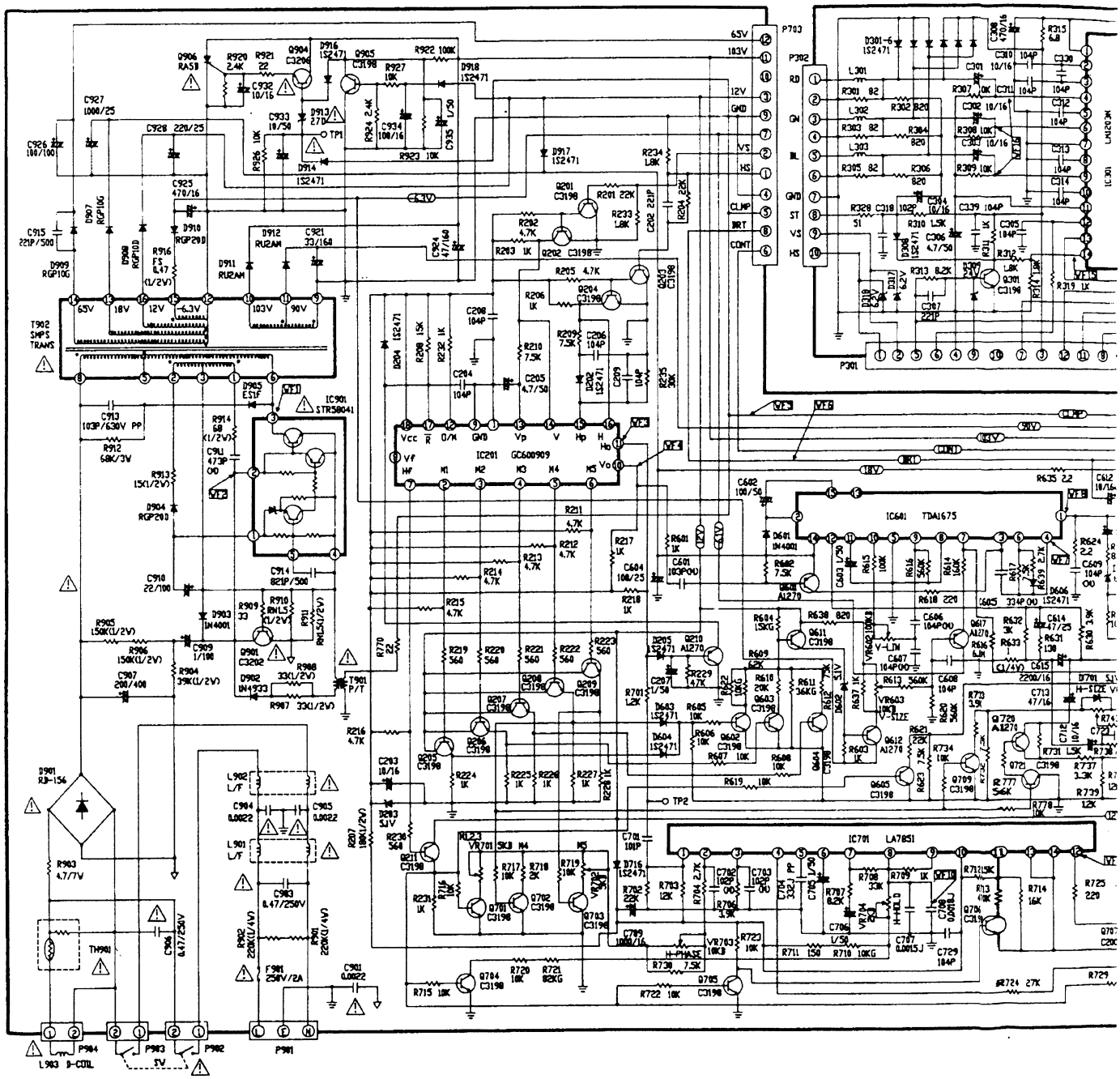
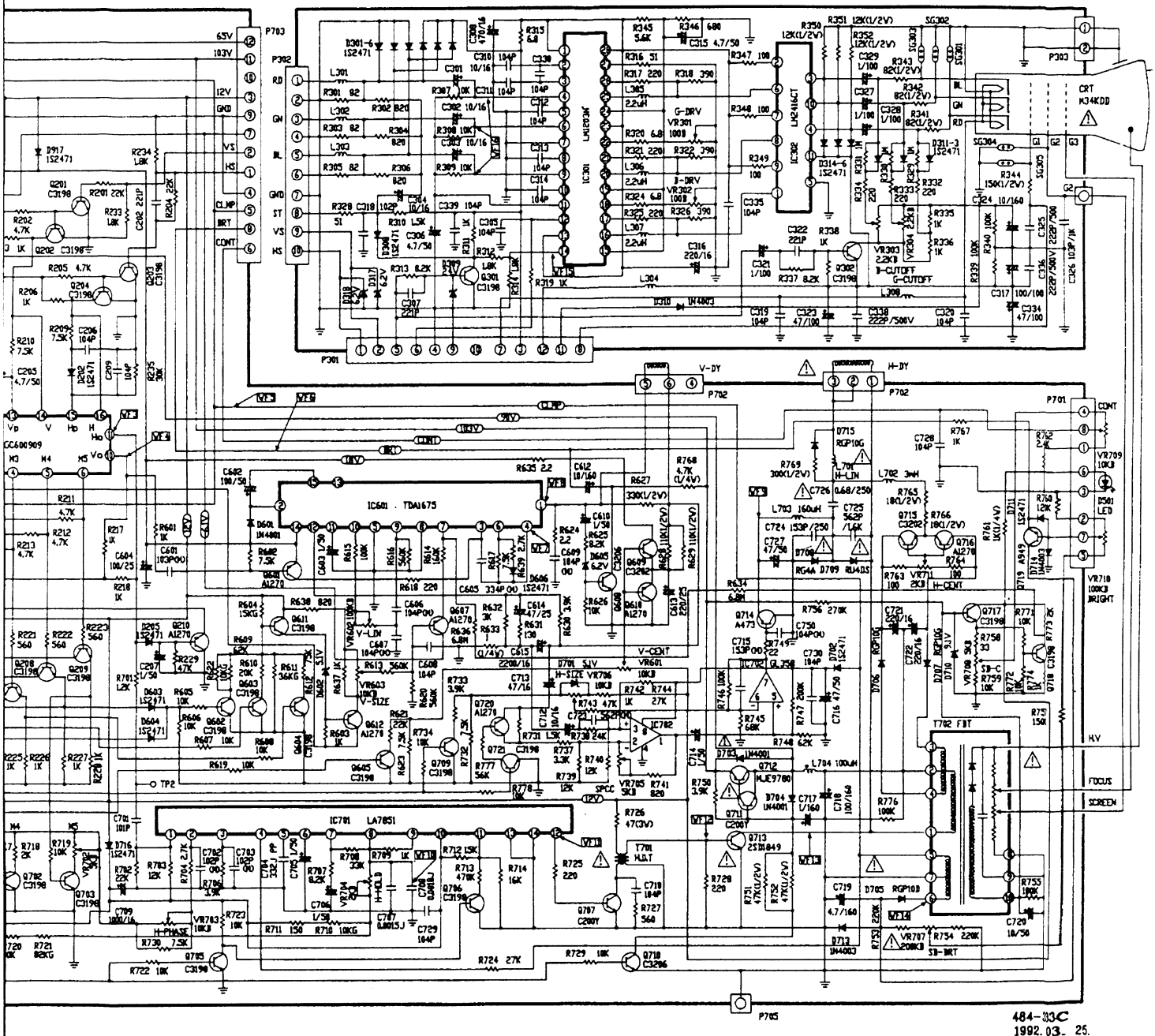
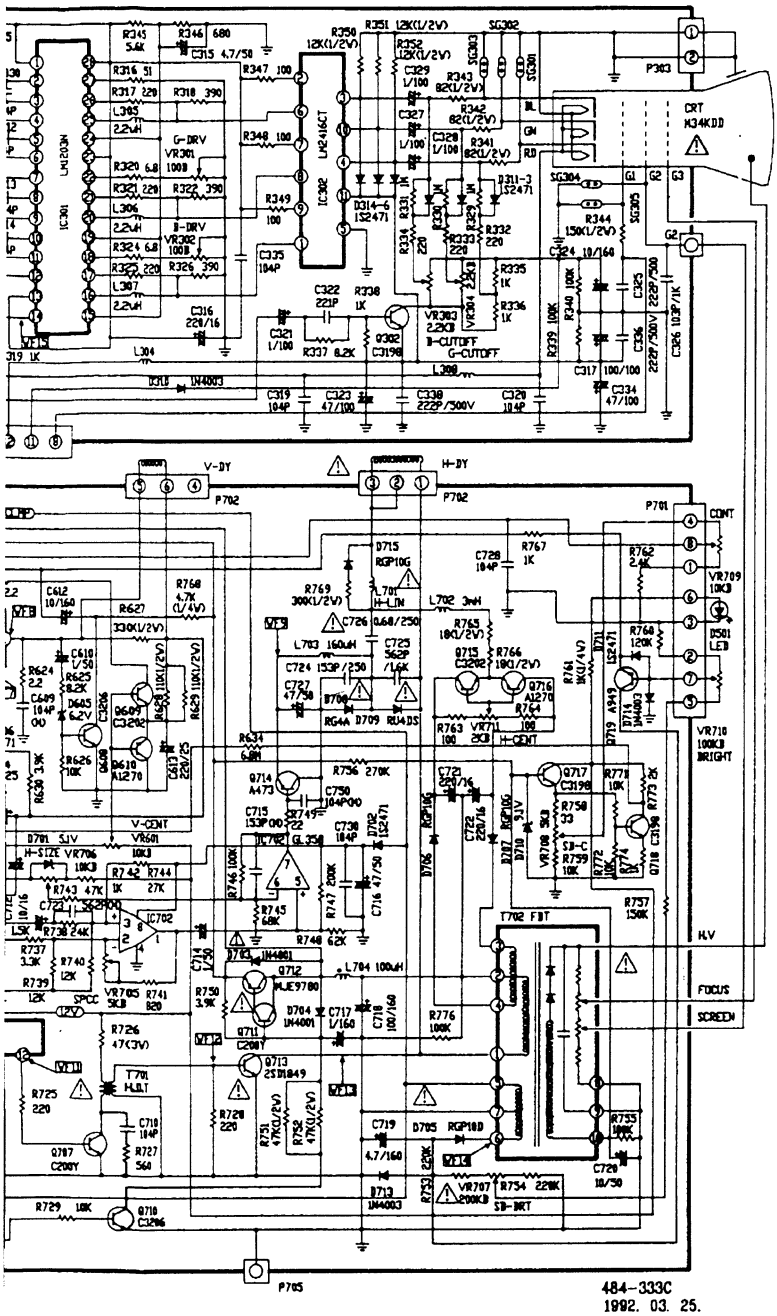


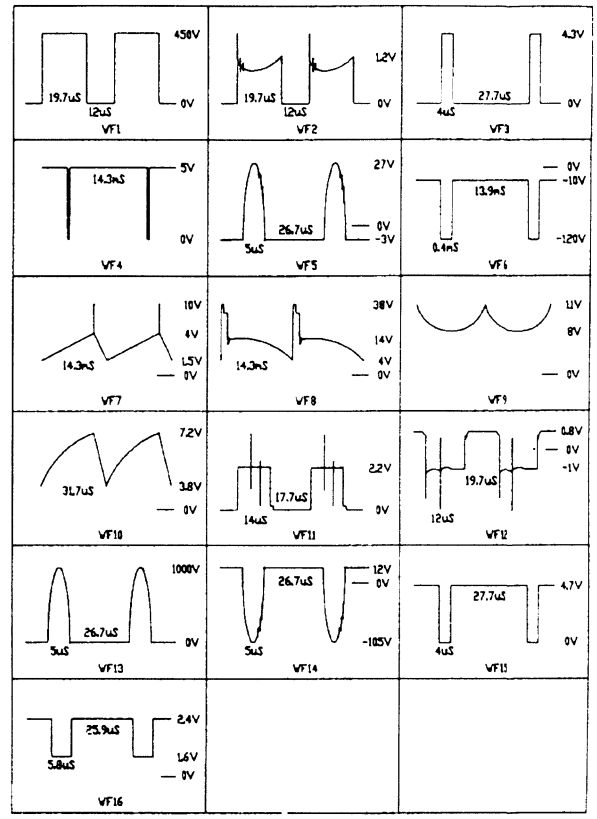
SCHEMATIC DIAGRAM (CQ430A/ 1460 PLUS 0.28 230V)



LUS 0.28 230V)



484-333C
1992. 03. 25.



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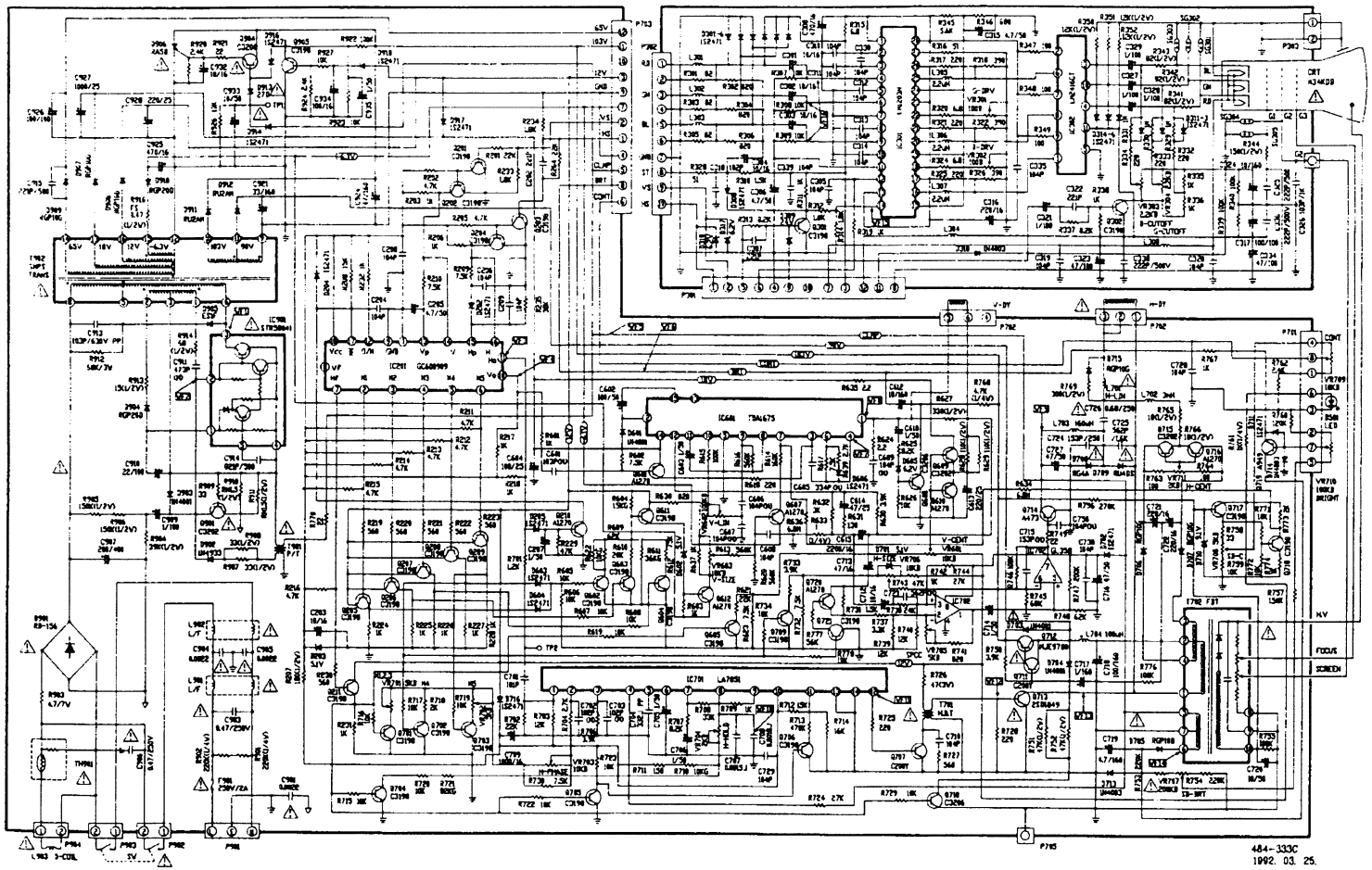
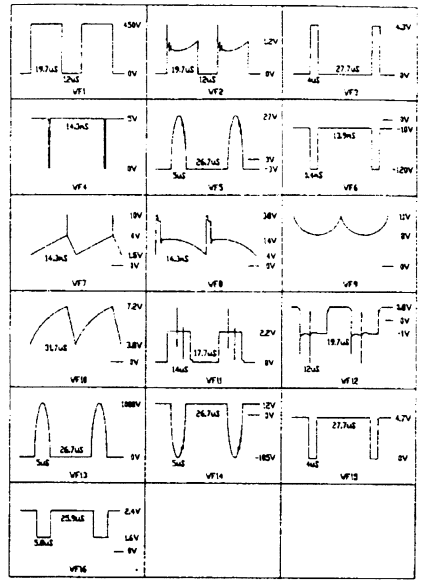


484-333C
1992. 03. 25.



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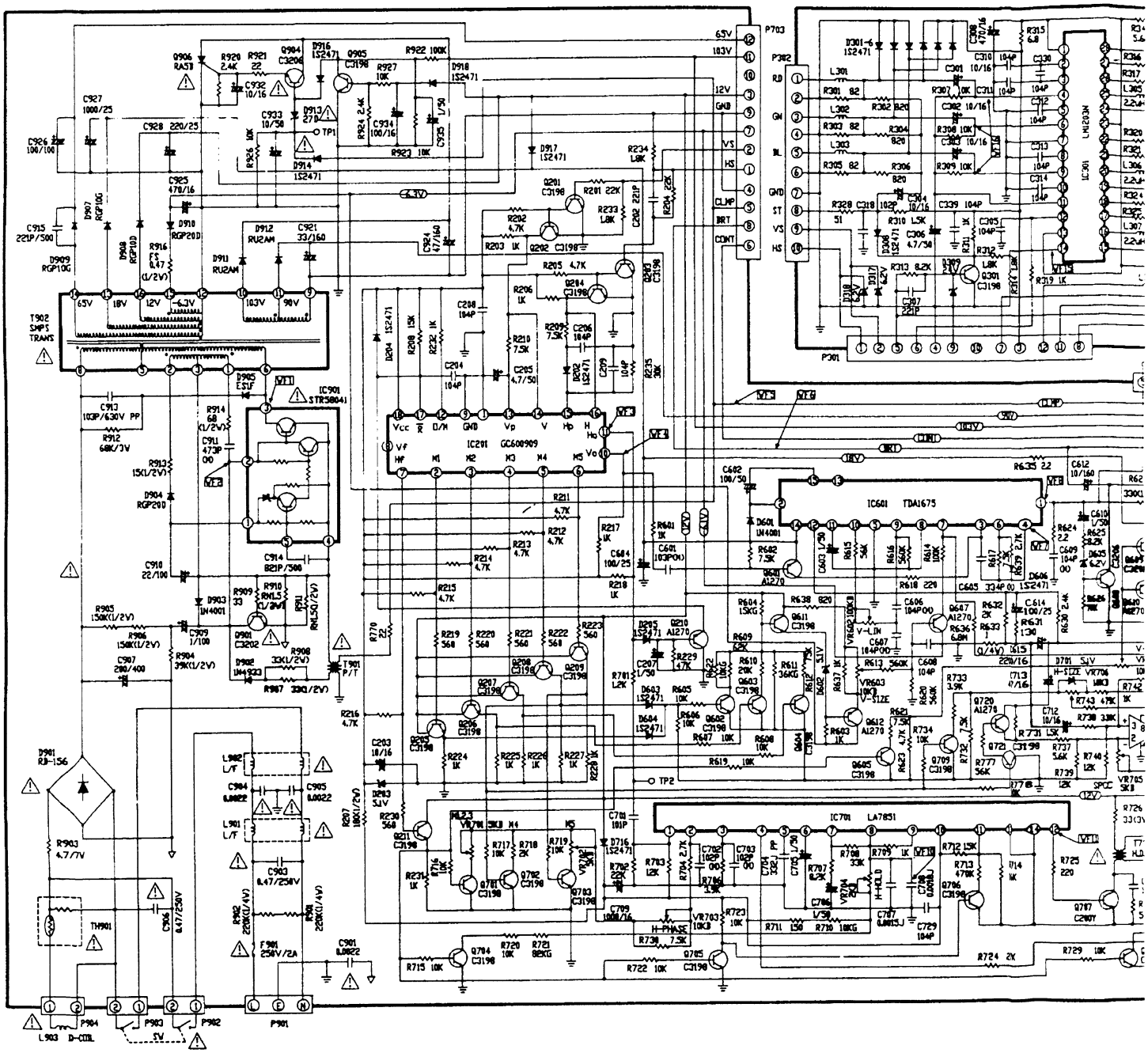
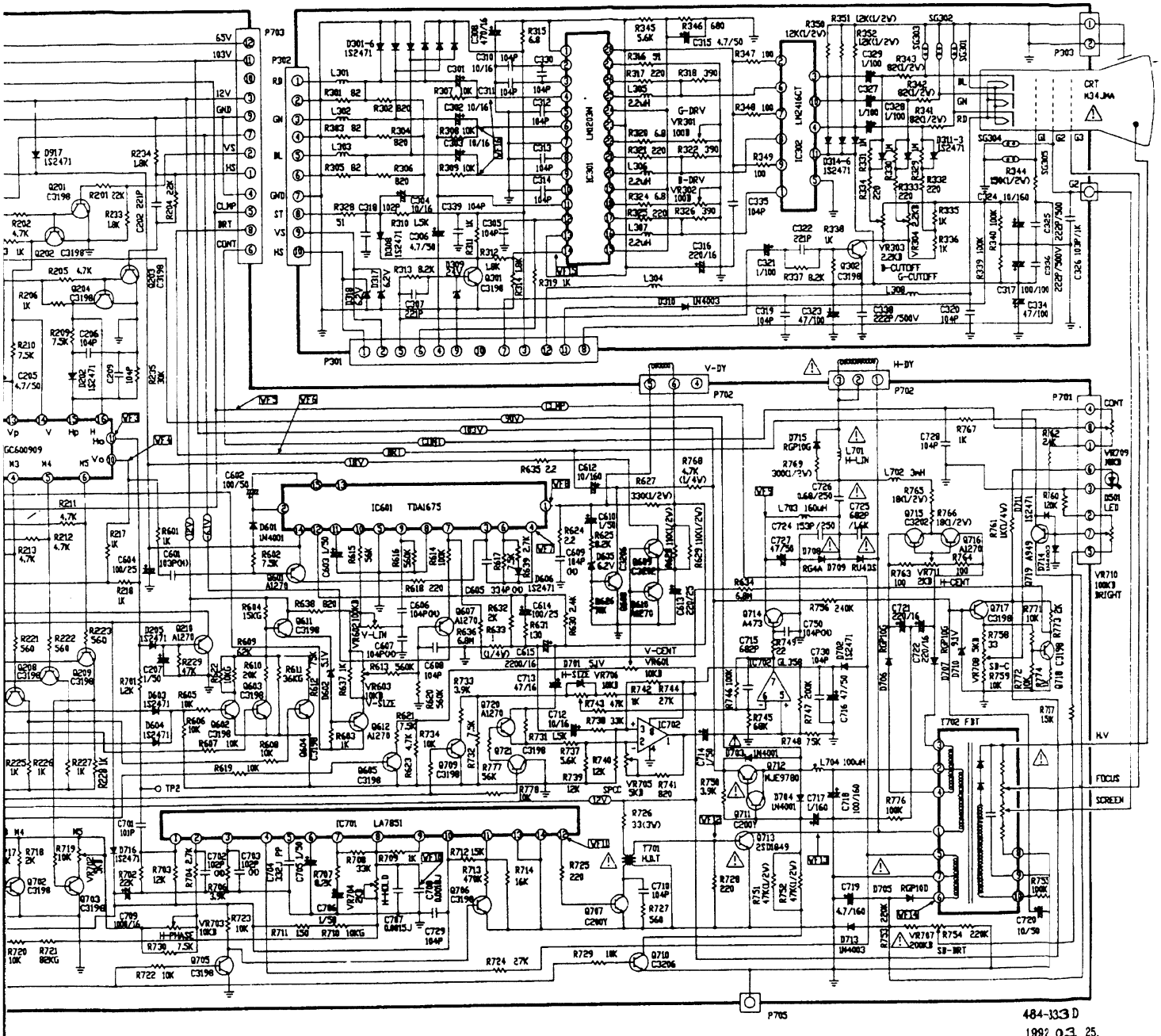
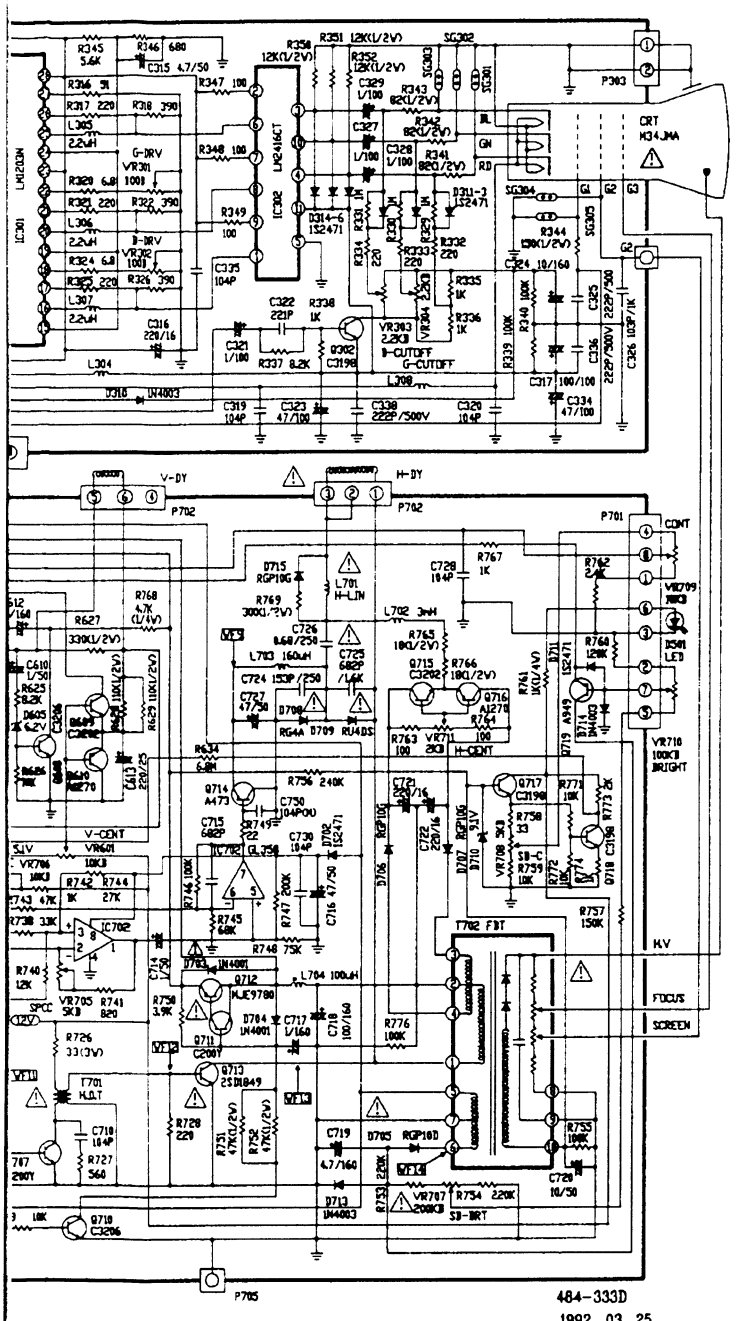


SCHEMATIC DIAGRAM (1453 PLUS 0.39 230V)



AM (1453 PLUS 0.39 230V)



484-333D
1992. 03. 25.

< COMPARISON TABLE FOR CDT TYPE >

NO.	PARTS	0.28 (MEDIUM)	0.28 (MEDIUM SHORT)	0.39 (MEDIUM SHORT)	0.28 (SLIM)
1	CDT	M34KBV80XE11 M34KDD50XE02	M34KBV80X11 M34KDD50X02(J)	M34KDP25XX31 M34KDP15XX31 M34JMA30X83	M34KDD80X06
2	FBT	154-185A(MURATA) 154-210A(HITACHI)	154-185A (MURATA) 154-210A (HITACHI)	154-210A (HITACHI)	154-210B 154-210C (HITACHI)
3	R614	160K	160K	100K	160K
4	R615	100K	100K	56K	100K
5	R630	3.9K	3.9K	2.4K	3.9K
6	R632	3K	3K	2K	3K
7	R737	3.3K	3.3K	5.6K	3.3K
8	R738	24K	24K	33K	24K
9	R748	62K	62K	75K	56K
10	R756	220K	270K	240K	270K
11	C715	15000pF	15000pF	6800pF	15000pF
12	C725	5600pF/1.6KV	5600pF/1.6KV	6800pF/1.6KV	5600pF/1.6KV
13	L701	150-468R	150-468R	150-468U	150-468R
14	C723	5600pF	5600pF	NONE	5600pF
15	R733	3.9K	3.9K	3.9K	5.1K
16	R742	1K	1K	1K	1.5K

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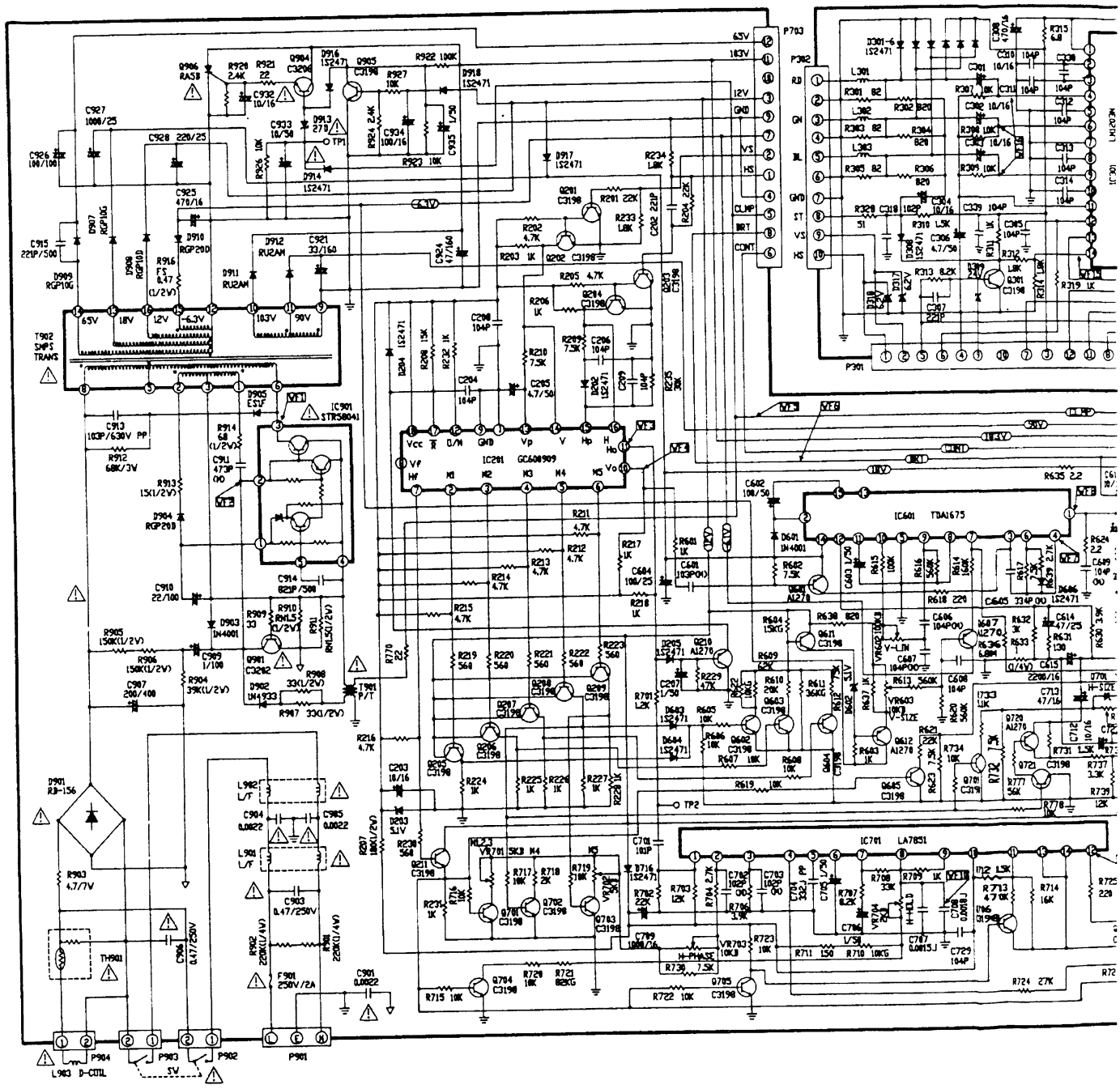
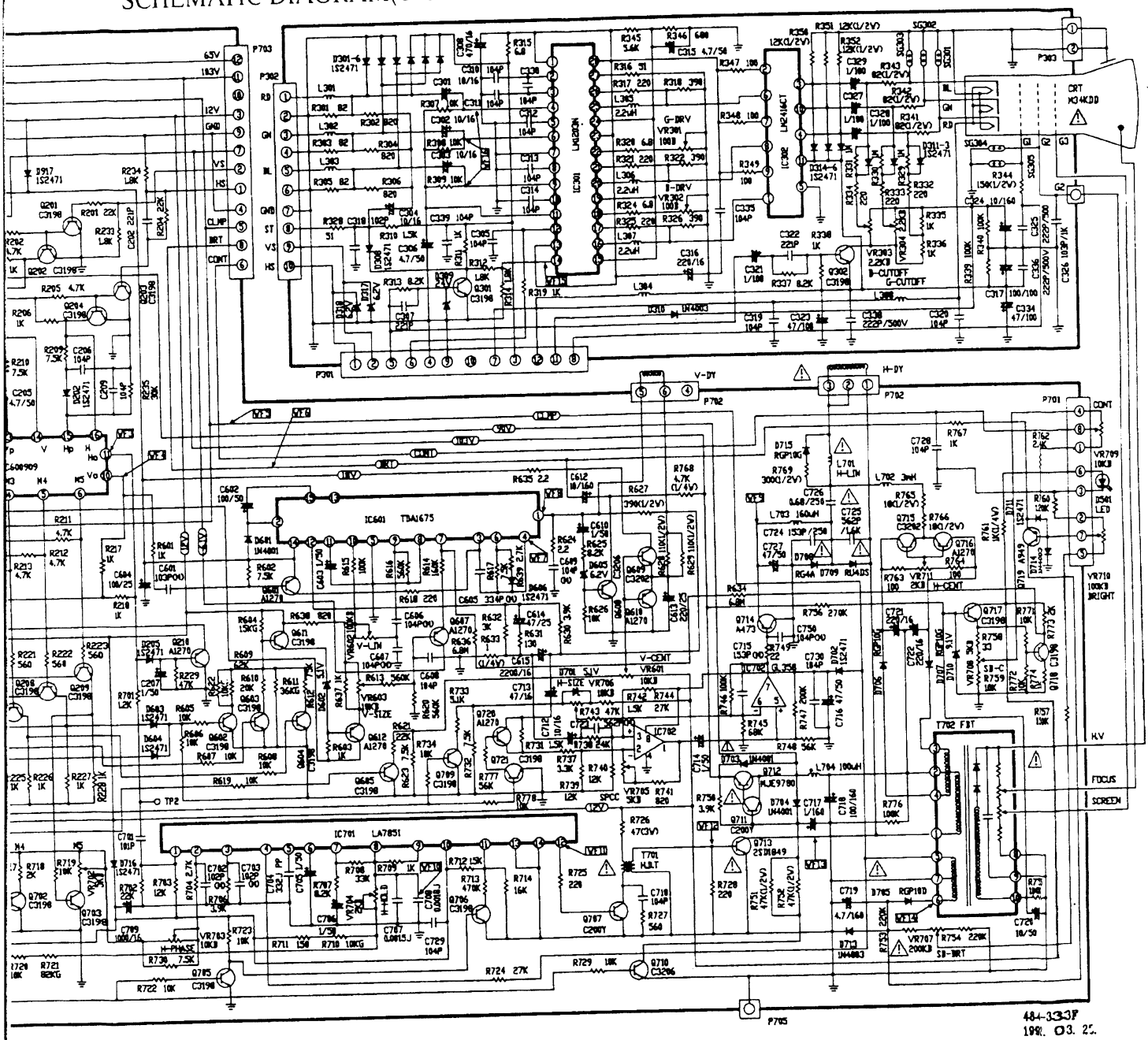
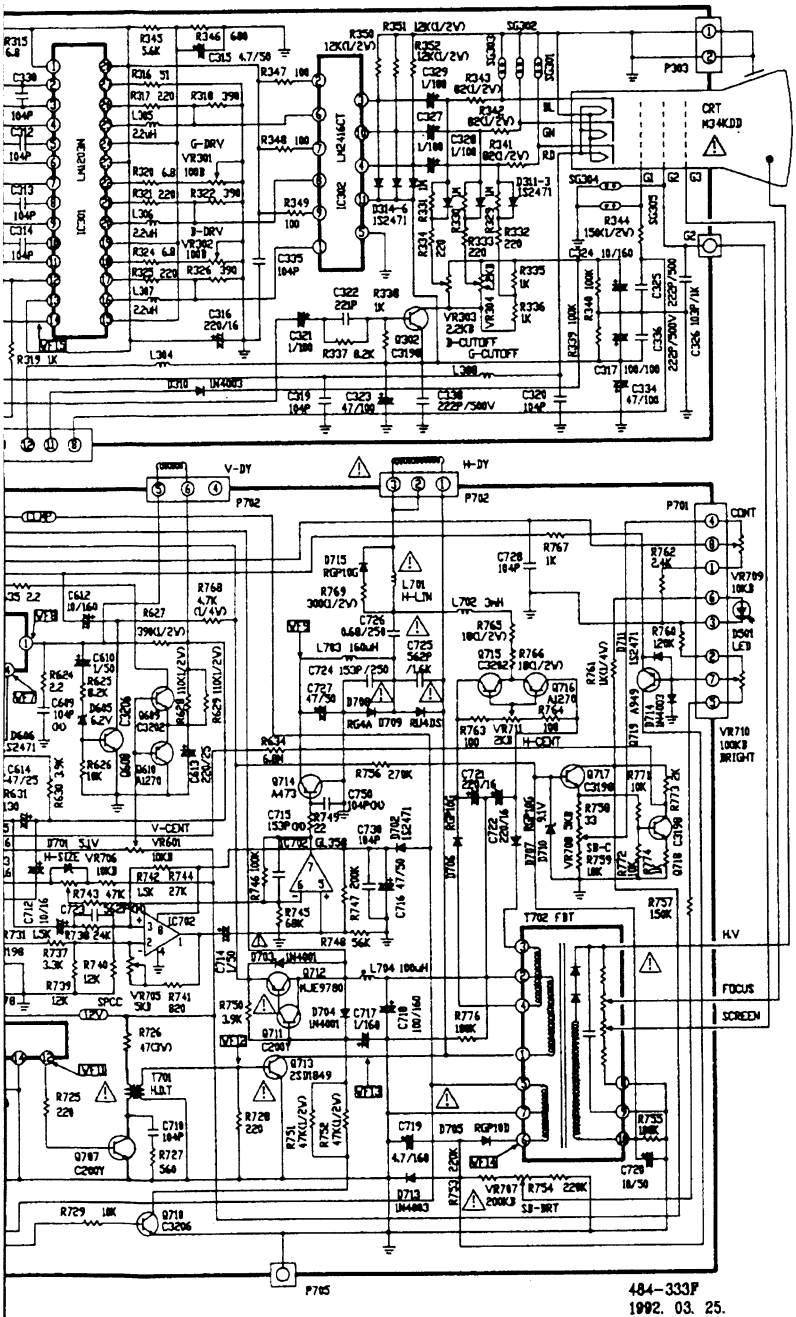


SCHEMATIC DIAGRAM(1460 SSI 0.28 VLMF 230V)



.28 VLMF 230V)



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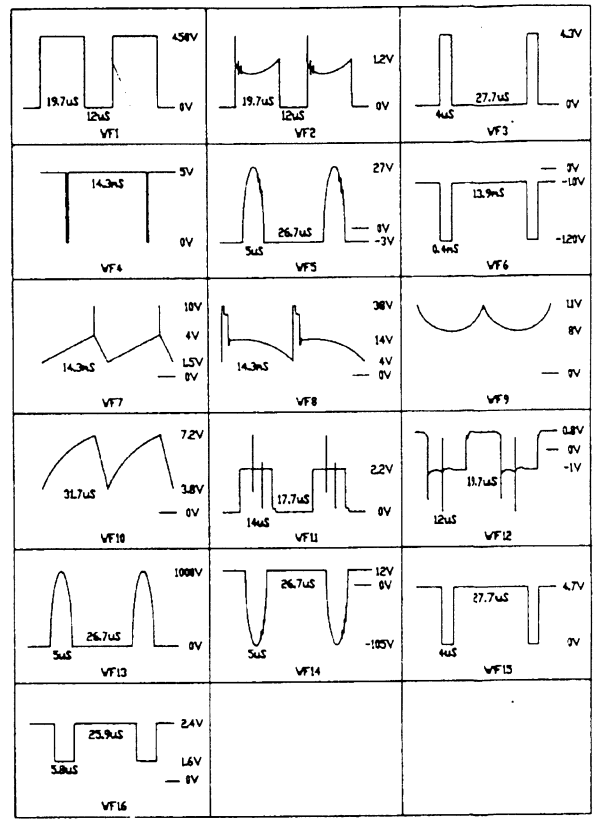

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FULL WHITE PATTERN

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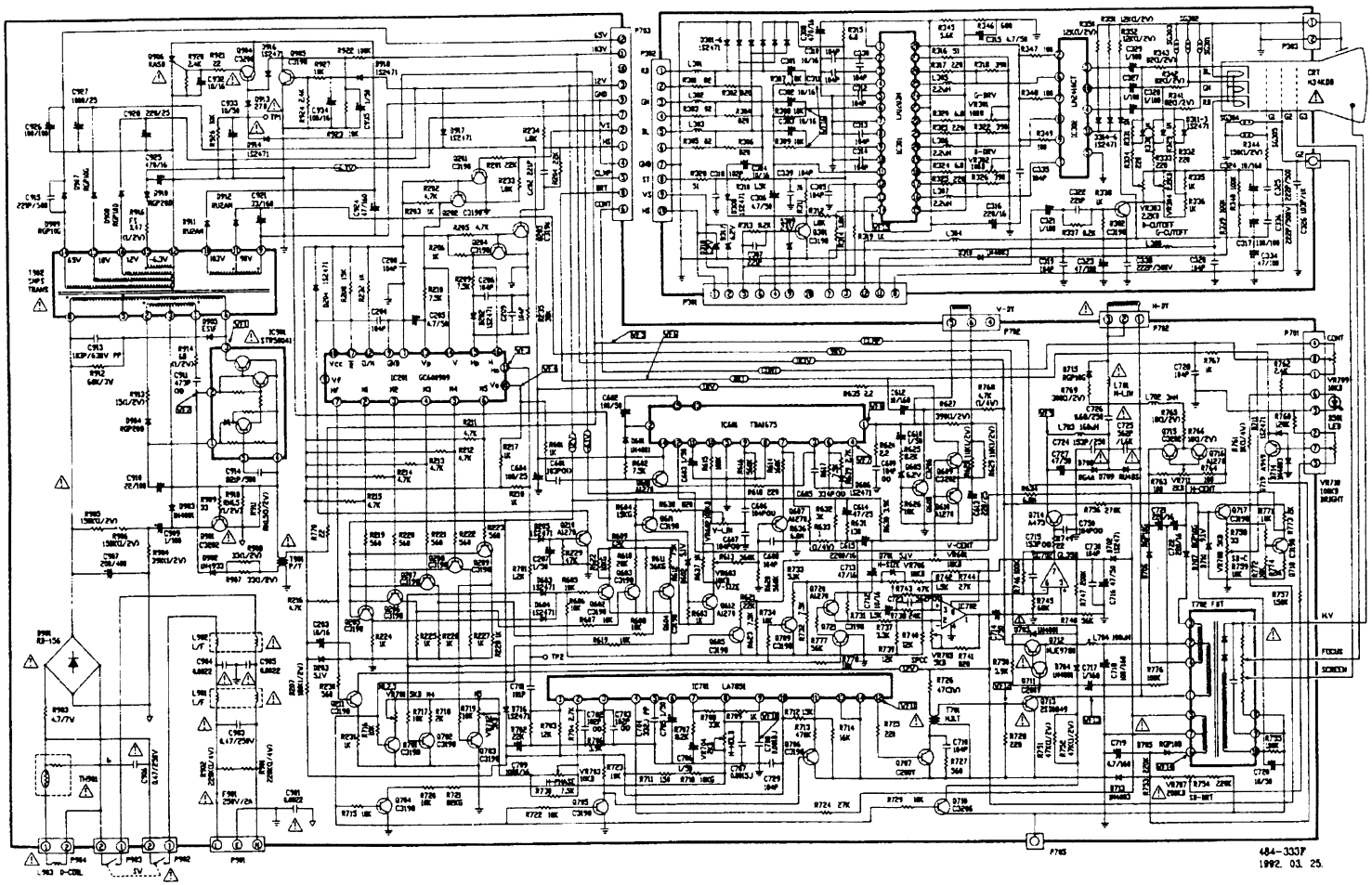
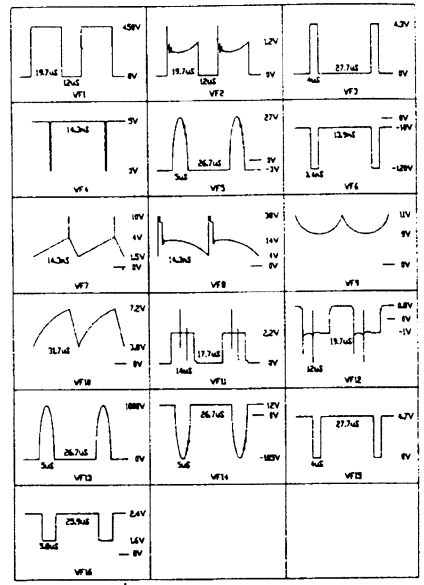


484-3337
1992. 03. 25.



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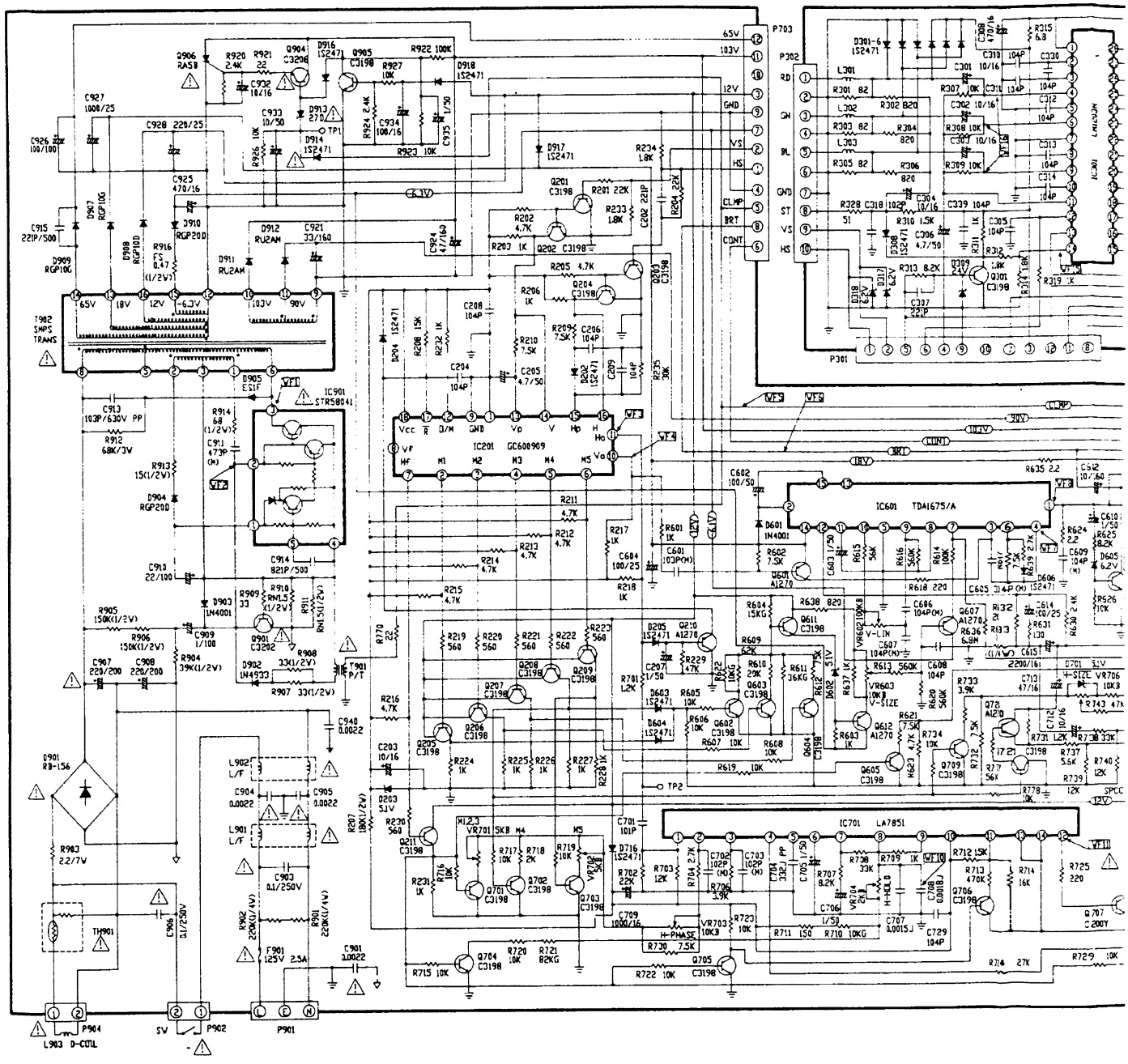
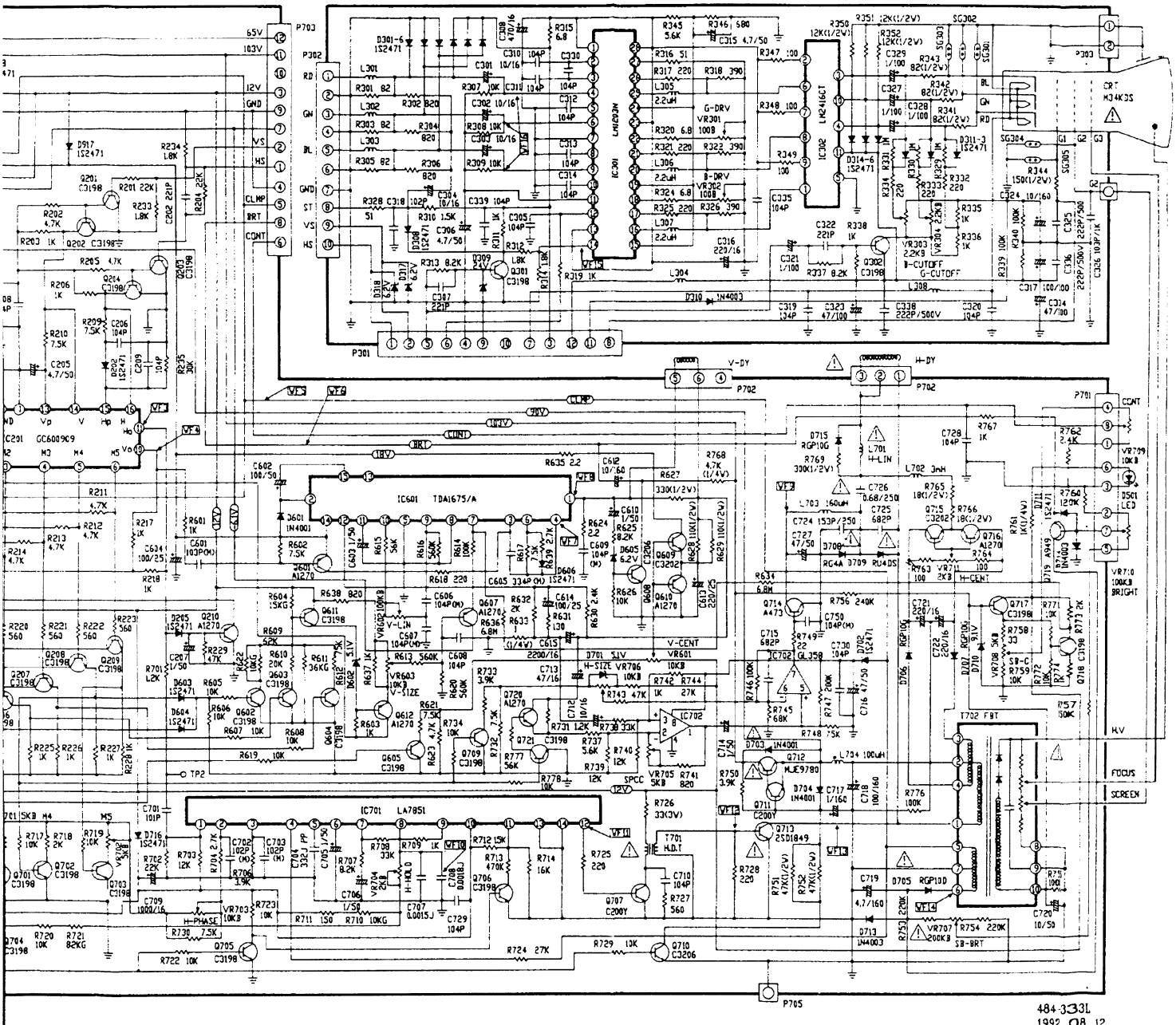
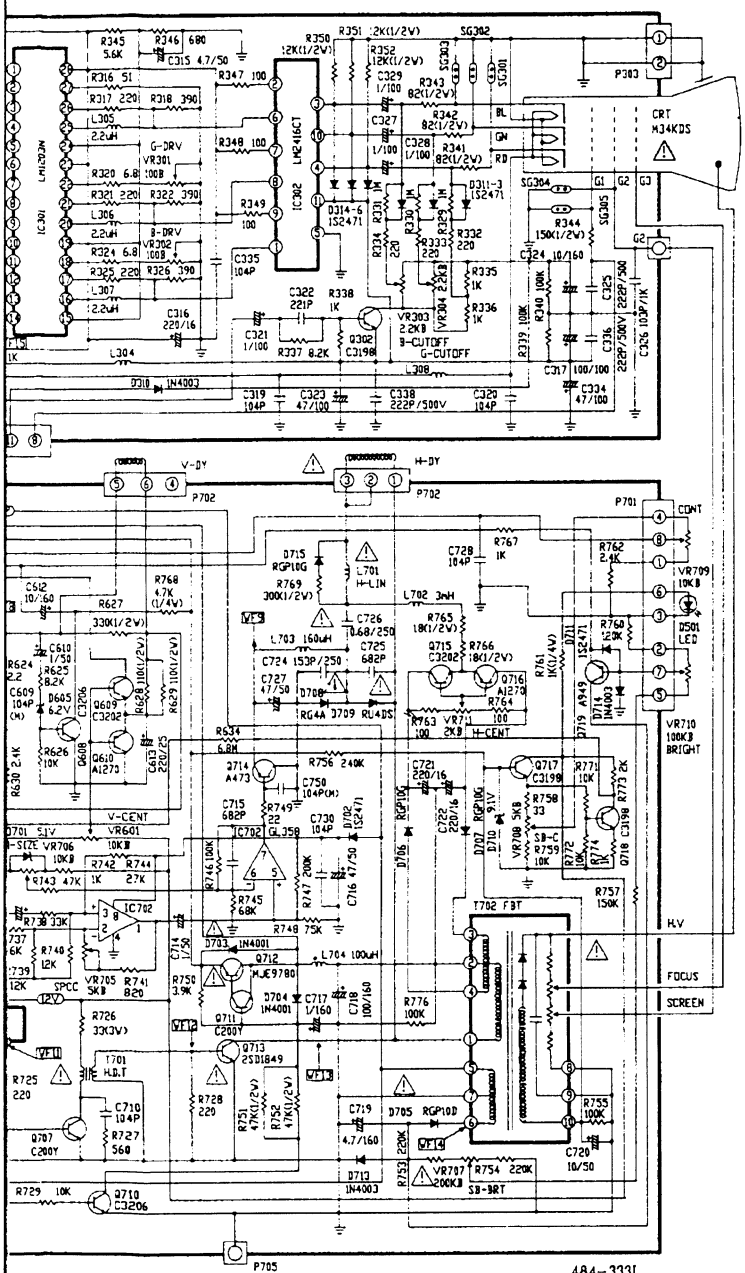


SCHEMATIC DIAGRAM (1460 PLUS 0.28 230V)



484-3331
1992 08. 12.

PLUS 0.28 230V)



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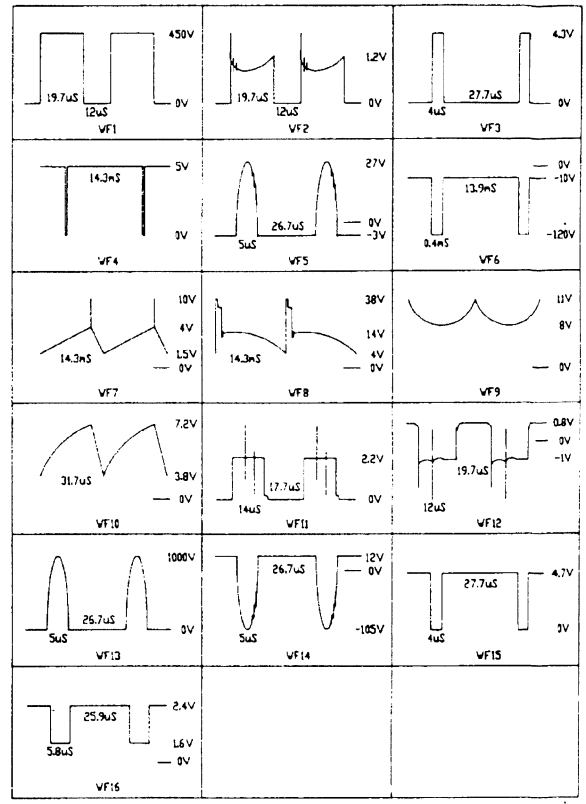
1992. 08. 12.



< WAVE FORM > : VGA MODE 2
FULL WHITE PATTERN

IMPORTANT SAFETY NOTICE

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IMPORTANT AVIS SUR LA SÉCURITÉ

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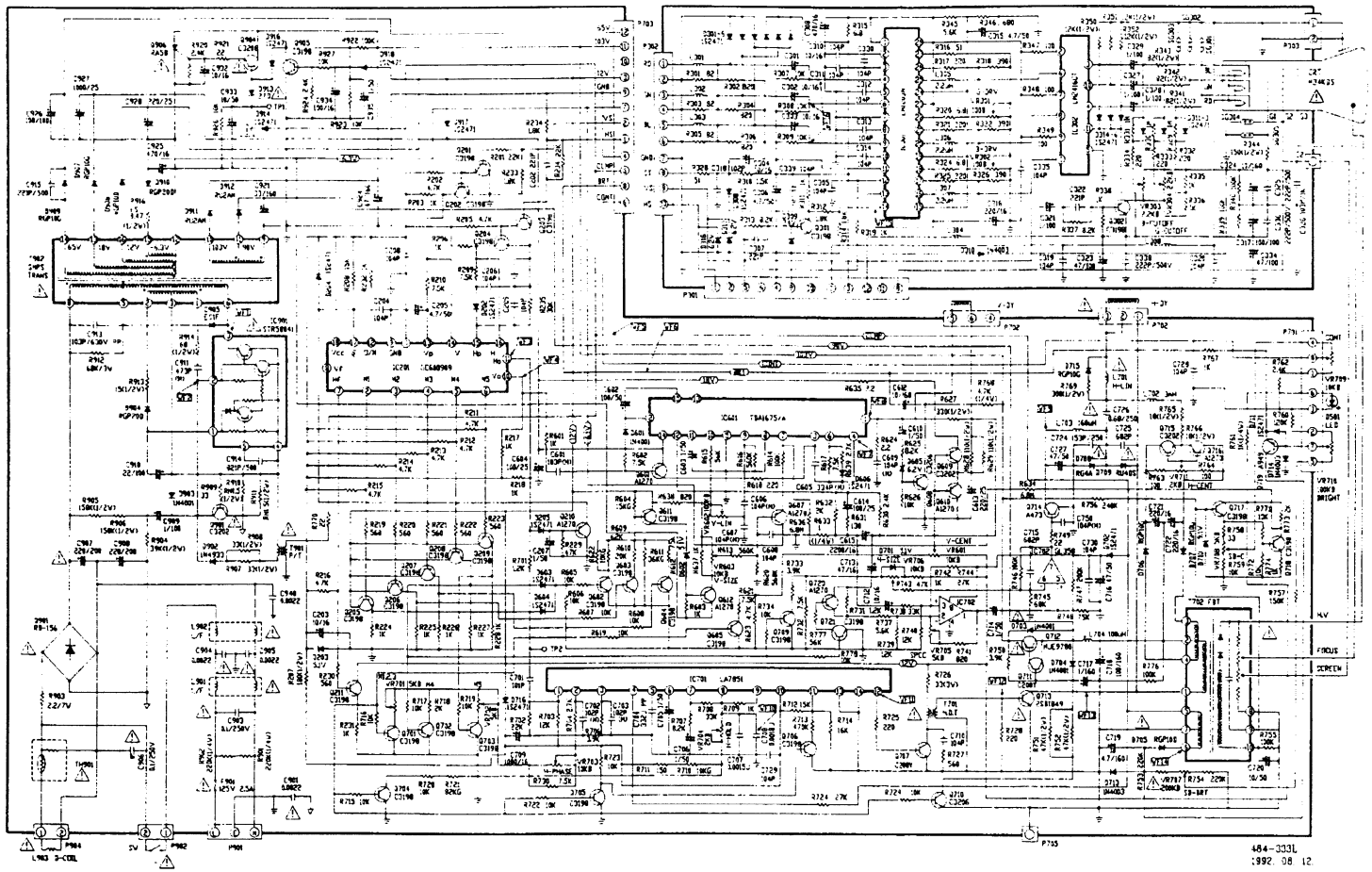
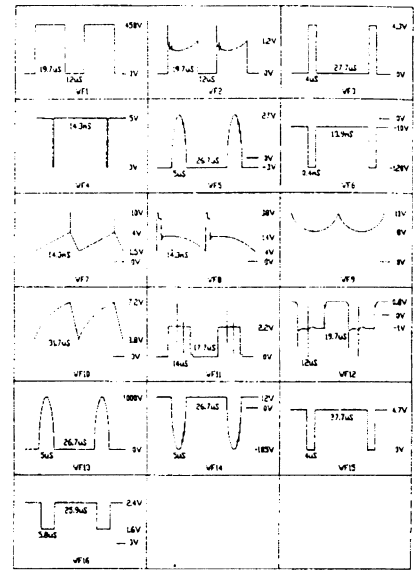
SCHEMATIC DIAGRAM (1460 PLUS 0.28 230V)



484-3331
1992. 08. 12.



< WAVE FORM > : VGA MODE 2
FULL WHITE PATTERN

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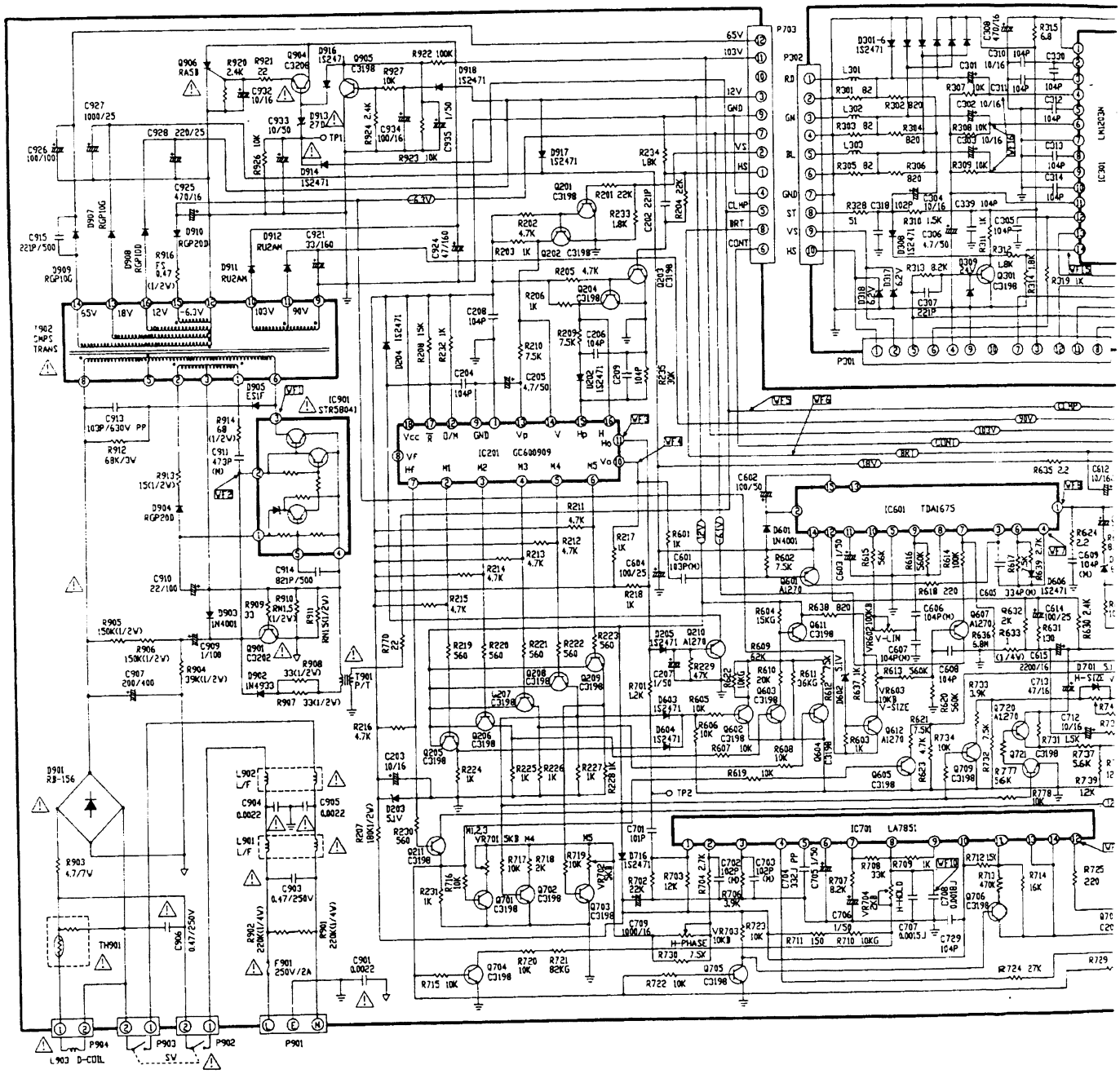
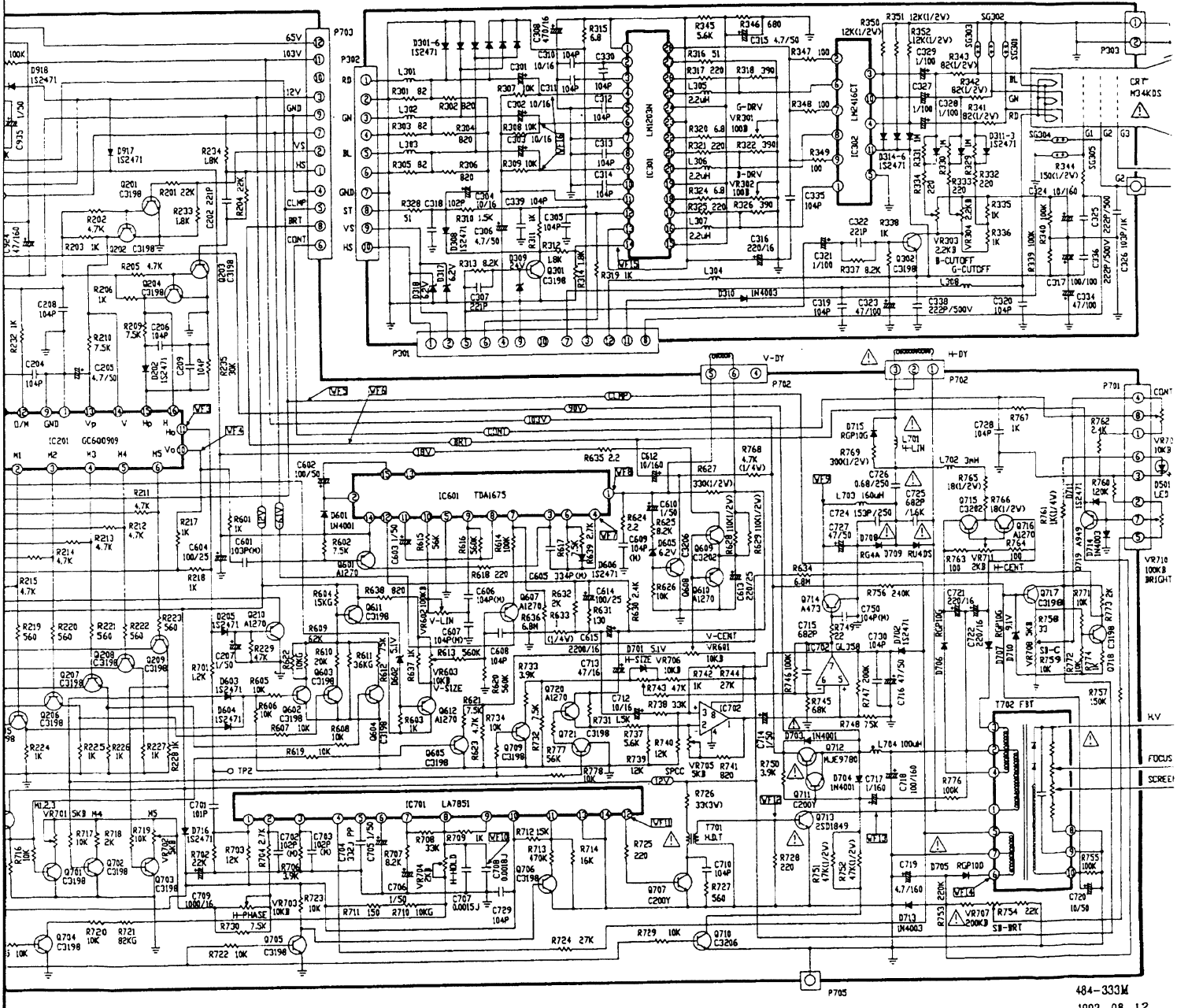
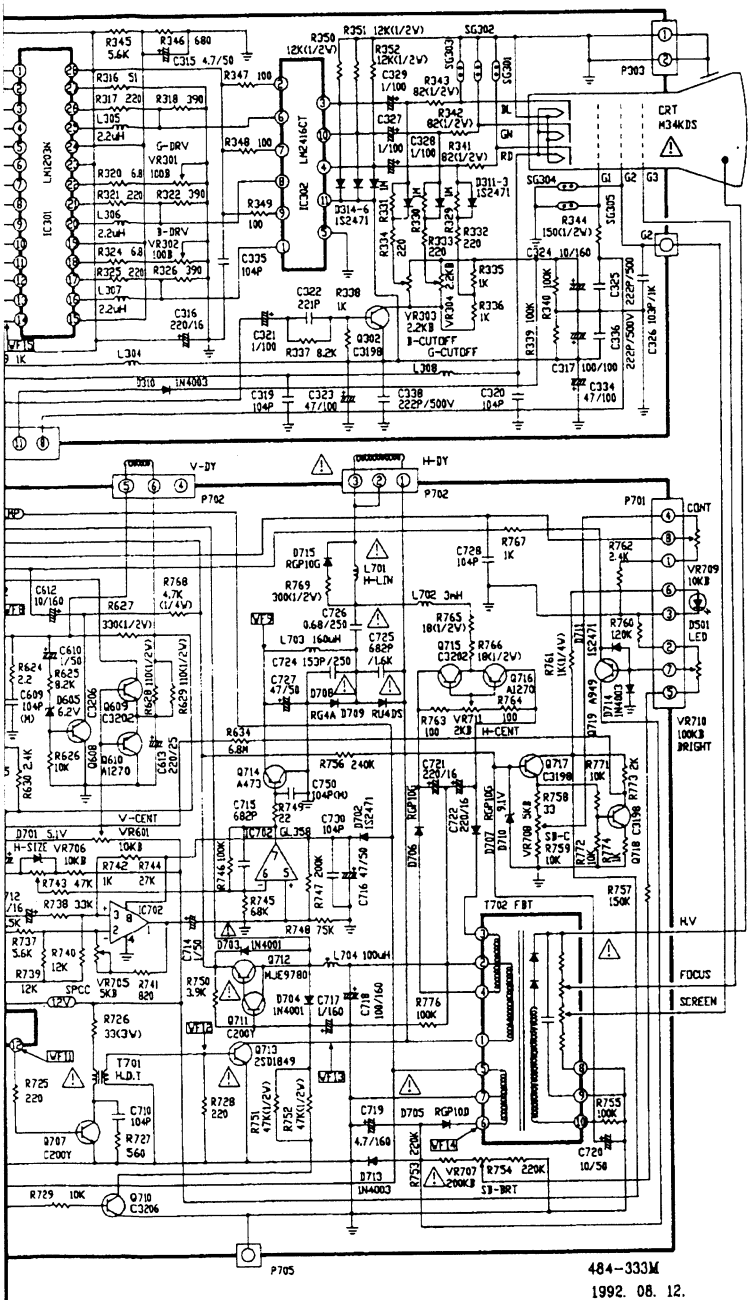


SCHEMATIC DIAGRAM (1460 PLUS 0.28 120V)



484-333M
1992. 08. 12.

S 0.28 120V)



484-333M
1992. 08. 12.

(COMPARISON TABLE FOR CDT TYPE)

NO.	PARTS	0.28 (MEDIUM)	0.28 (MEDIUM SHORT)	0.39 (MEDIUM SHORT)	0.28 (VLMF)
1	CDT	M34KBV80XE11 M34KDD50XE02	M34K3V80X11 M34KDD50X02(J)	M34KDP25XX31 M34KDP15XX31 M34JMA30X83	M34KDD80X06
2	FBT	154-185A(MURATA) 154-210A(HITACHI)	154-185A (MURATA) 154-210A (HITACHI)	154-210A (HITACHI)	154-210B 154-210C (HITACHI)
3	R614	160K	160K	100K	160K
4	R615	100K	100K	56K	100K
5	R630	3.9K	3.9K	2.4K	3.9K
6	R632	3K	3K	2K	3K
7	R737	3.3K	3.3K	5.6K	3.3K
8	R738	24K	24K	33K	24K
9	R748	62K	62K	75K	56K
10	R756	220K	270K	240K	270K
11	C715	15000pF	15000pF	6800pF	15000pF
12	C725	5600pF/1.6KV	5600pF/1.6KV	6800pF/1.6KV	5600pF/1.6KV
13	L701	150-468R	150-468R	150-468U	150-468R
14	C723	5600pF	5600pF	NONE	5600pF
15	R733	3.9K	3.9K	3.9K	5.1K
16	R742	1K	1K	1K	1.5K
17	R621	22K	22K	7.5K	22K
18	R623	7.5K	7.5K	4.7K	7.5K
19	C614	47u 25V	47u 25V	100u 25V	47u 25V
20	R726	RS 47(3W)	RS 47(3W)	RS 33(3W)	RS 47(3W)

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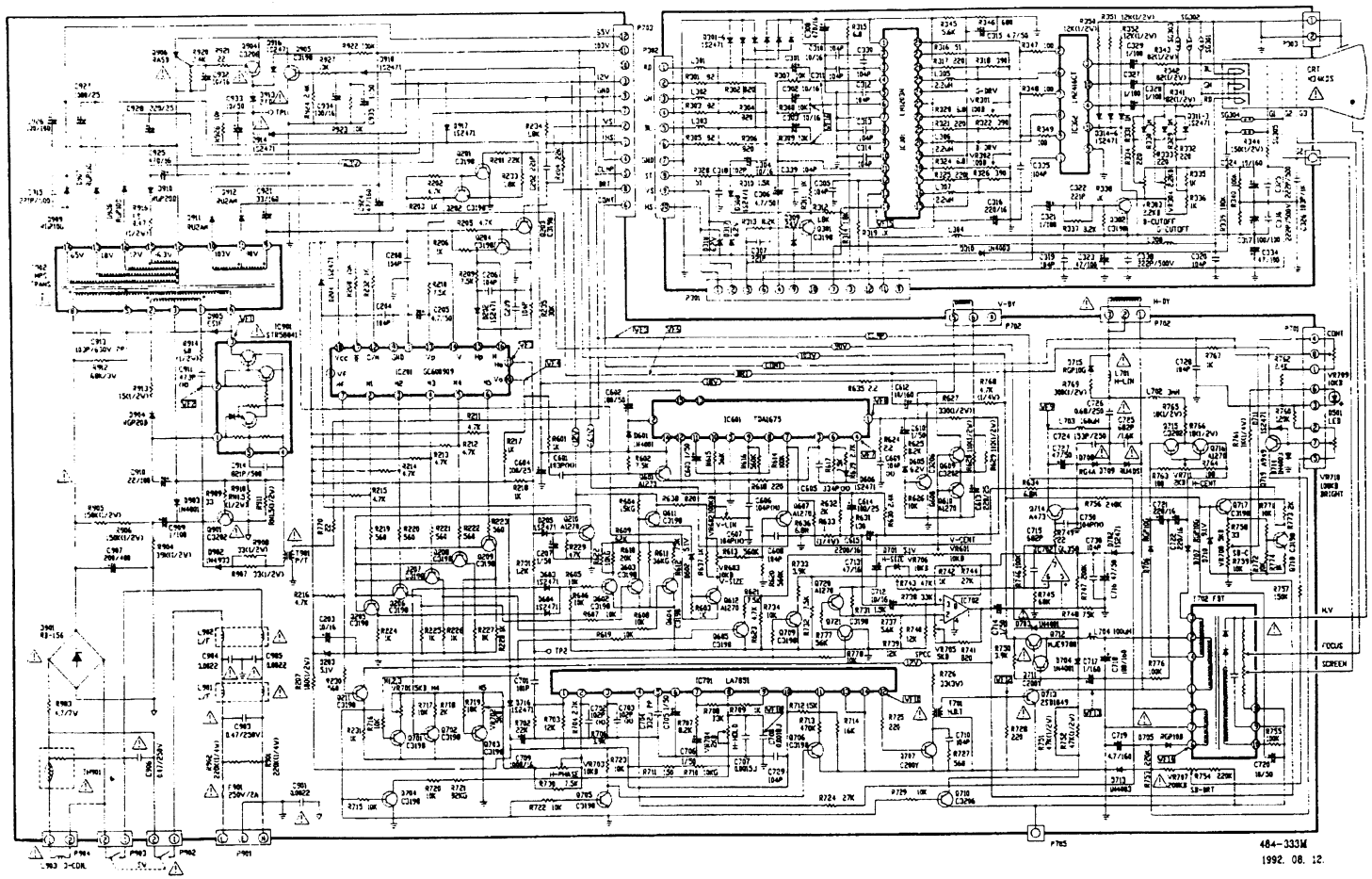
SCHEMATIC DIAGRAM (1460 PLUS 0.28 120V)



< COMPARISON TABLE FOR CRT TYPE >

NO	PARTS	0.28 (MEDIUM)	0.28 (MEDIUM SHORT)	0.39 (MEDIUM SHORT)	0.28 (VLHF)
1	CRT	M34KBV80XE11 M34KD050XE02	M34KBV80X11 M34KD050X02(-)	M34KDP25X431 M34KDP15X431 M34JAK20X87	M34KD280X06
2	FBT	154-185A(MURATA) 154-210A(HITACHI)	154-185A (MURATA) 154-210A (HITACHI)	154-210A (HITACHI)	154-210B 154-219C (HITACHI)
3	R614	150K	150K	100K	150K
4	R615	100K	100K	56K	100K
5	R630	3.9K	3.9K	2.4K	3.9K
6	R632	3K	3K	2K	3K
7	R737	3.3K	3.3K	5.6K	3.3K
8	R738	24K	24K	33K	24K
9	R748	62K	62K	75K	56K
10	R756	220K	270K	240K	270K
11	C715	15000pF	15000pF	6800pF	15000pF
12	C725	5600pF/16KV	5600pF/16KV	6800pF/16KV	5600pF/16K
13	L701	150-468R	150-468R	150-468U	150-468R
14	C723	5600pF	5600pF	NONE	5600pF
15	R733	3.9K	3.9K	3.9K	5.1K
16	R742	1K	1K	1K	1.5K
17	R621	22K	22K	7.5K	22K
18	R623	7.5K	7.5K	4.7K	7.5K
19	C614	47u 25V	47u 25V	100u 25V	47u 25V
20	R726	RS 47(3W)	RS 47(3W)	RS 33(3W)	RS 47(3W)

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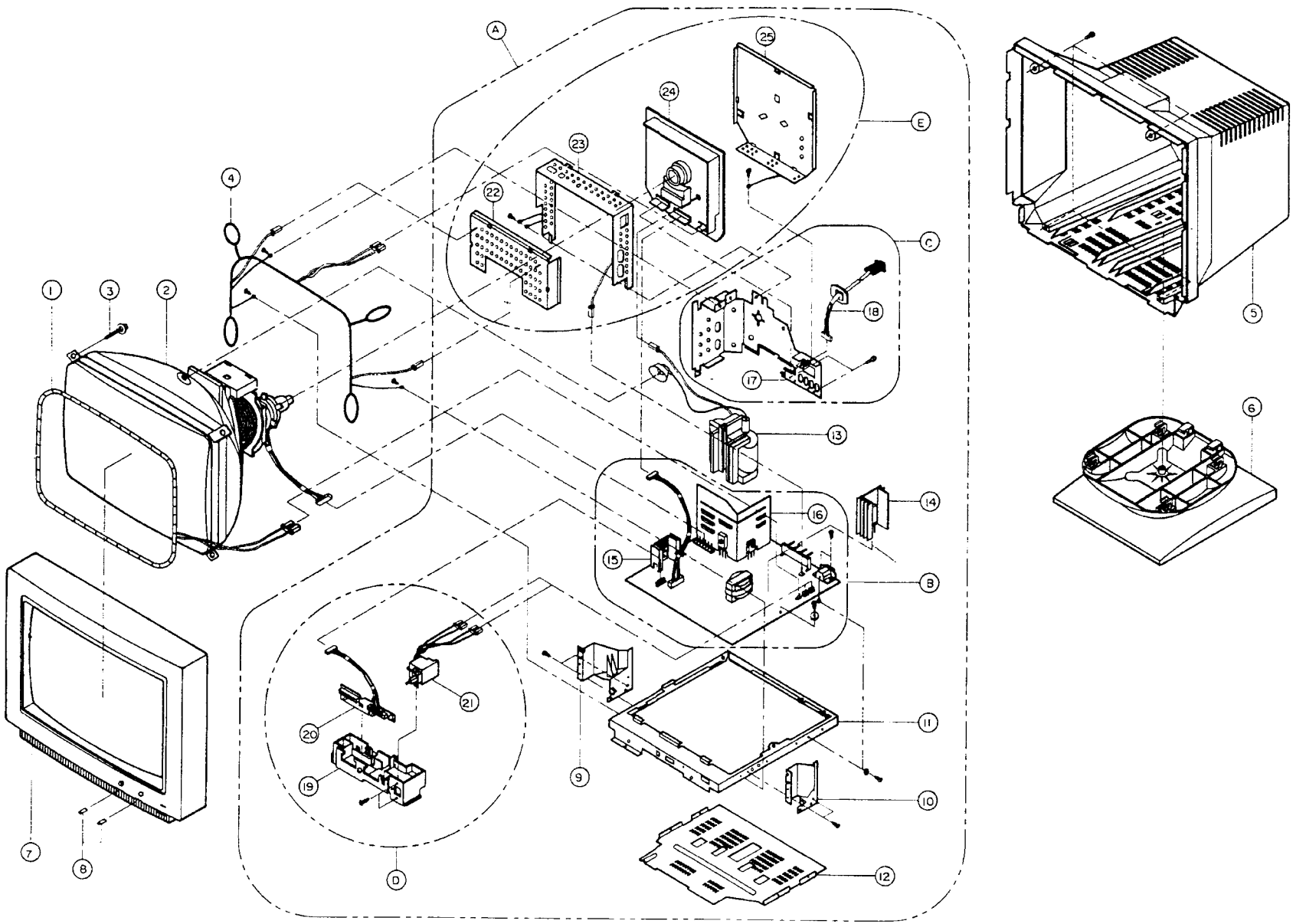
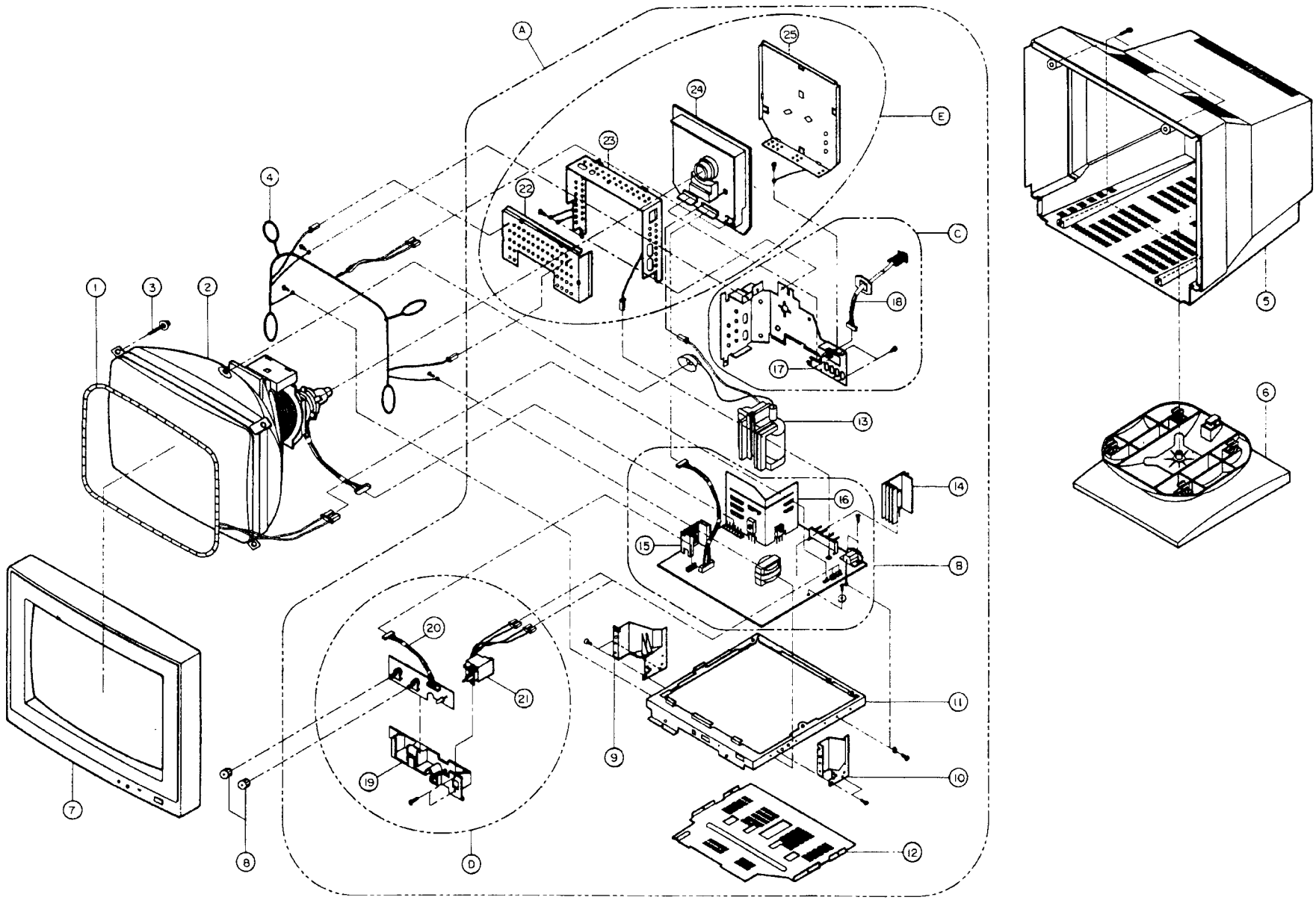
CQ430A(1460/1453 PLUS, 1460 SSI) Exploded View



PARTS ASS'Y CQ430A(1460 PLUS / 1453 PLUS / 1460 SSI)

NO.	DESCRIPTION	PART NO.	REMARK
1	COIL DEGAUSSING	150-373F 150-373F	1460/1453 PLUS - 120V 1460/1453 PLUS,1460 SSI - 230V
2	CDT, M34KDD50X02 M34KDD80X06 M34JMA30X83 M34KDP25XX31 M34KDP15XX31	112-832A 112-835A 112-838A 2055-10191A 2055-10181A	1460 PLUS - 120V/230V 1460 SSI - 230V 1453 PLUS - 120V/230V 1453 PLUS - 120V/230V 1453 PLUS - 120V/230V
3	PHP+5X30+GW22	339-002B	
4	LEAD SET CPT EARTH	170-612K	
5	BACK COVER, ASS'Y	303-D32Q	
6	TILT SWIVEL ASS'Y	231-015A	
7	CABINET ASS'Y	300-539L	
8	KNOB SLIDE	440-811A	
9	BRACKET SIDE(L) FIX	340-329B	
10	BRACKET SIDE(R) FIX	340-329A	
11	BRACKET ASS'Y MAIN	340-330A	
12	BRACKET BOTTOM SHIELD	340-328A	
13	FBT, 1FGV19 2435335 2436882 2436883	154-185A 154-210A 154-210B 154-210C	1460 PLUS - 120V/230V 1460/1453 PLUS - 120V/230V 1460 SSI - 230V 1460 SSI - 230V
14	PLATE ASS'Y HEAT SINK	407-205F	
15	PLATE ASS'Y HEAT SINK	409-034A 409-042A	1460 PLUS/SSI - 120V/230V 1453 PLUS - 120V/230V
16	PLATE ASS'Y HEAT SINK	409-035A 409-043A	1460 PLUS/SSI - 120V/230V 1453 PLUS - 120V/230V
17	BRACKET, FOR REAR	340-397A	
18	CONNECTOR ASS'Y, SIGNAL CABLE	387-756A	
19	BRACKET, VOLUME FIX	340-331A	
20	PCB ASS'Y, CONTROL	110-P14H	
21	SWITCH ASS'Y POWER	387-611J 387-656F	1460/1453 PLUS - 120V 1460/1453 PLUS,1460 SSI - 230V
22	PLATE, SHIELD FRONT	407-J74A	
23	PLATE, SHIELD CPT BOARD	407-J75A	
24	PCB ASS'Y, VIDEO	110-Q97A 110-S58A	1460 PLUS/SSI - 120V/230V 1453 PLUS - 120/230V
25	PLATE, COVER SHIELD	407-J76A	
	FRONT SHIELD ASS'Y (MPR-II)	407-N60A	ONLY 1460 SSI - 230V
A	CHASSIS ASS'Y MAIN TOTAL	309-409C 309-409B 309-409D 309-422A 309-422B	1460 PLUS - 120V 1460 PLUS - 230V 1460 SSI - 230V 1453 PLUS - 120V 1453 PLUS - 230V
B	PCB ASS'Y, MAIN(CA-14)	110-Q96C 110-Q96B 110-Q96D 110-S53A 110-S53B	1460 PLUS - 120V 1460 PLUS - 230V 1460 SSI - 230V 1453 PLUS - 120V 1453 PLUS - 230V
C	CHASSIS ASS'Y, REAR BRACKET	309-408B	
D	CHASSIS ASS'Y VOLUME	309-414A 309-414B	1460/1453 PLUS,1460 SSI - 230V 1460/1453 PLUS - 120V
E	PCB ASS'Y CPT TOTAL	110-S44A 110-S57A	1460 PLUS/SSI - 120V/230V 1453 PLUS - 120V/230V

CQ432A Exploded View

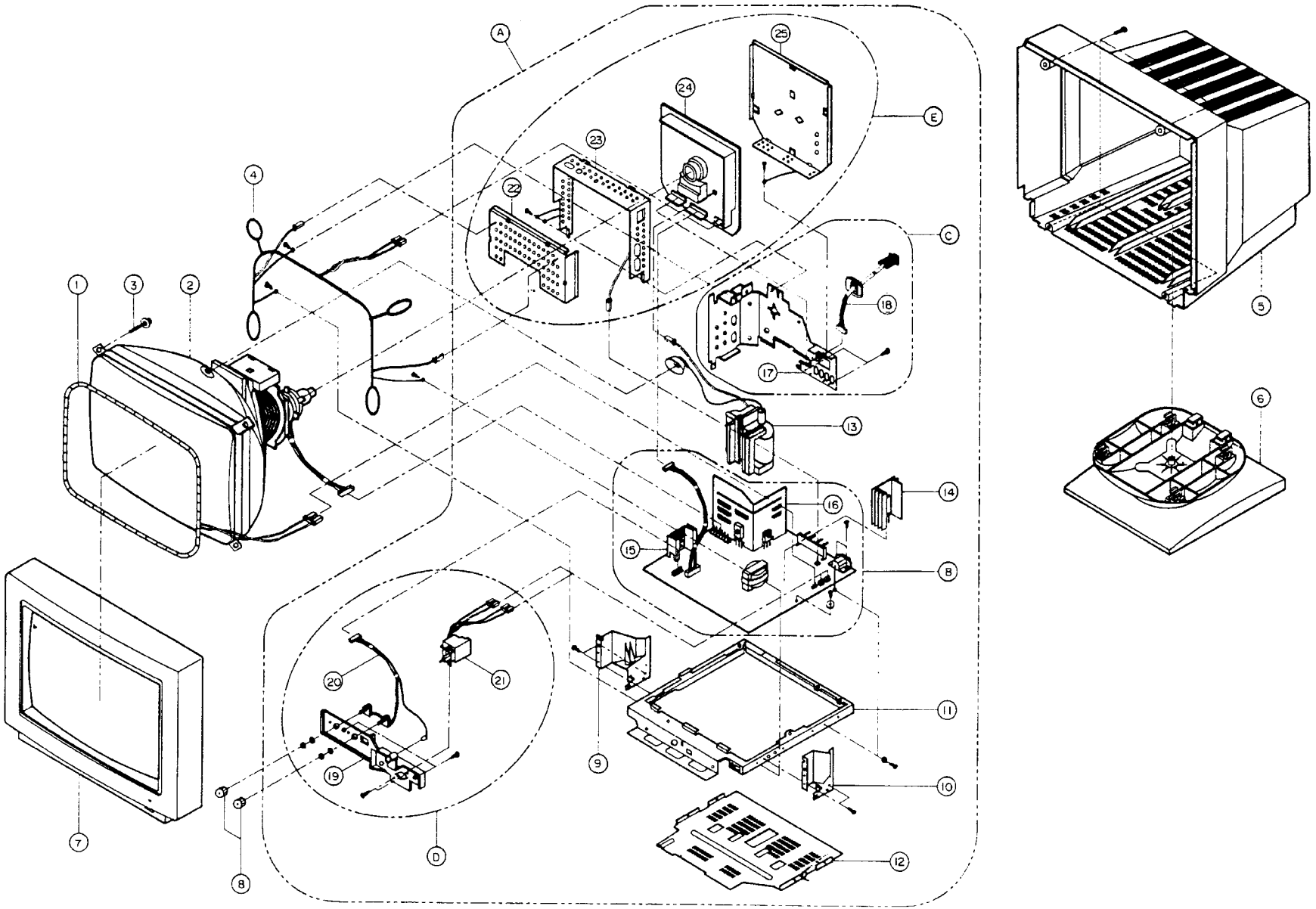


PARTS ASS'Y CQ432A(0.39)

NO.	DESCRIPTION	PART NO.
1	COIL DEGAUSSING	150-373E
2	CDT, M34JMA30X83(J)	112-838A
3	PHP+5X30+GW22	339-002B
4	LEAD SET CPT EARTH	170-612K
5	BACK COVER, ASS'Y	303-F39F
6	TILT SWIVEL ASS'Y	231-027B
7	CABINET ASS'Y	300-532A
8	KNOB SLIDE	440-601E
9	BRACKET SIDE(L) FIX	340-329B
10	BRACKET SIDE(R) FIX	340-329A
11	BRACKET ASS'Y MAIN	340-330E
12	BRACKET BOTTOM SHIELD	340-328B
13	FBT, 2435335	154-210A
14	PLATE ASS'Y HEAT SINK	407-205F
15	PLATE ASS'Y HEAT SINK	409-042A

NO.	DESCRIPTION	PART NO.
16	PLATE ASS'Y HEAT SINK	409-043A
17	BRACKET, FOR REAR	340-397A
18	CONNECTOR ASS'Y, SIGNAL CABLE	387-756A
19	BRACKET, VOLUME FIX	340-350A
20	PCB ASS'Y, CONTROL	110-P14K
21	SWITCH ASS'Y POWER	387-656F
22	PLATE, SHIELD FRONT	407-J74A
23	PLATE, SHIELD CPT BOARD	407-J75A
24	PCB ASS'Y, VIDEO	110-S58A
25	PLATE, COVER SHIELD	407-J76A
A	CHASSIS ASS'Y MAIN TOTAL	309-422D
B	PCB ASS'Y, MAIN(CA-14)	110-S53D
C	CHASSIS ASS'Y, REAR BRACKET	309-408B
D	CHASSIS ASS'Y VOLUME	309-414D
E	PCB ASS'Y CPT TOTAL	110-S57A

CQ440A Exploded View



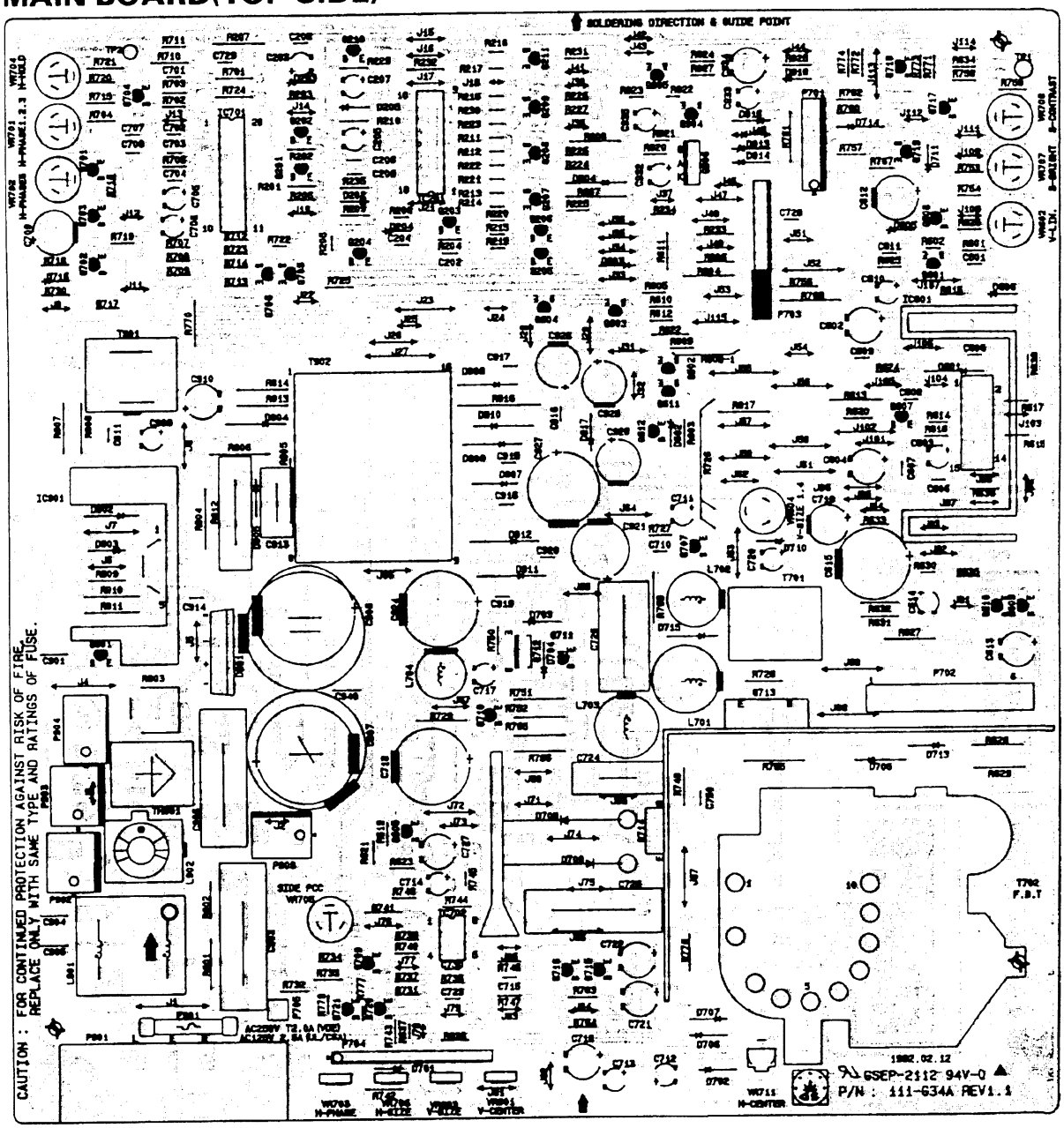
PARTS ASS'Y CQ440A

NO.	DESCRIPTION	PART NO.
1	COIL DEGAUSSING	150-573F
2	CDT, M34KDD50X02	112-832A
3	PHP+5X30+GW22	339-002B
4	LEAD SET CPT EARTH	170-612K
5	BACK COVER, ASS'Y	303-E62B
6	TILT SWIVEL ASS'Y	231-023A
7	CABINET ASS'Y	300-531B
8	KNOB SLIDE	440-601E
9	BRACKET SIDE(L) FIX	340-329B
10	BRACKET SIDE(R) FIX	340-329A
11	BRACKET ASS'Y MAIN	340-366A
12	BRACKET BOTTOM SHIELD	340-328A
13	FBT, 1FGV19 2435335	154-185A 154-210A
14	PLATE ASS'Y HEAT SINK	407-205F
15	PLATE ASS'Y HEAT SINK	409-034A

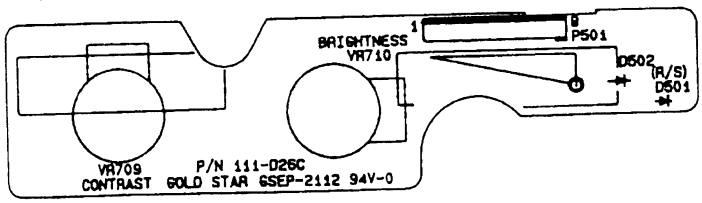
NO.	DESCRIPTION	PART NO.
16	PLATE ASS'Y HEAT SINK	409-035A
17	BRACKET, FOR REAR	340-397A
18	CONNECTOR ASS'Y, SIGNAL CABLE	387-756A
19	BRACKET, VOLUME FIX	340-360A
20	PCB ASS'Y, CONTROL	387-692E
21	SWITCH ASS'Y POWER	387-656F
22	PLATE, SHIELD FRONT	407-J74A
23	PLATE, SHIELD CPT BOARD	407-J75A
24	PCB ASS'Y, VIDEO	110-Q97A
25	PLATE, COVER SHIELD	407-J76A
A	CHASSIS ASS'Y MAIN TOTAL	309-423A
B	PCB ASS'Y, MAIN(CA-14)	110-S55A
C	CHASSIS ASS'Y, REAR BRACKET	309-408B
D	CHASSIS ASS'Y VOLUME	309-395C
E	PCB ASS'Y CPT TOTAL	110-S44A

PRINTED CIRCUIT BOARD

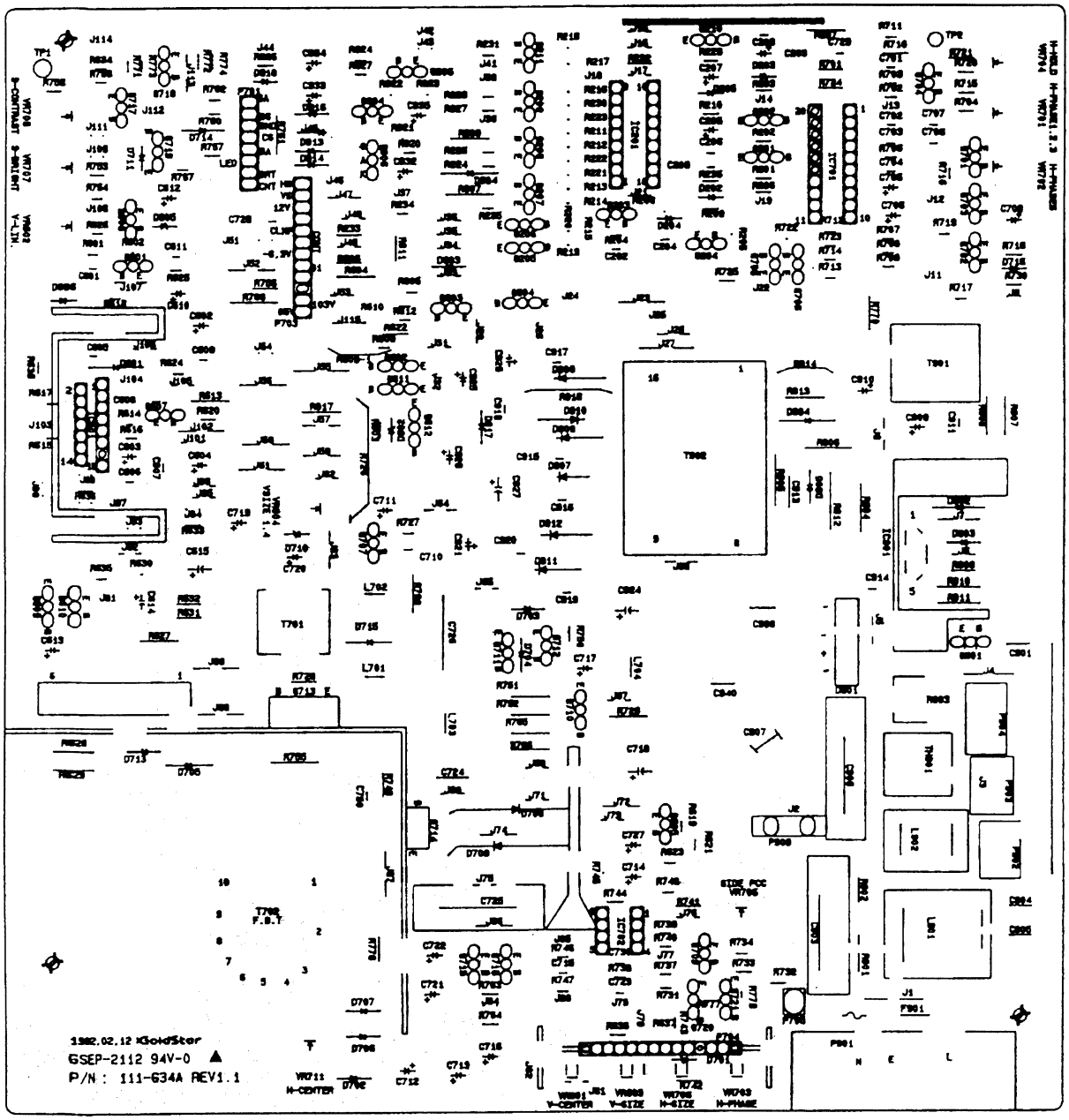
MAIN BOARD(TOP SIDE)



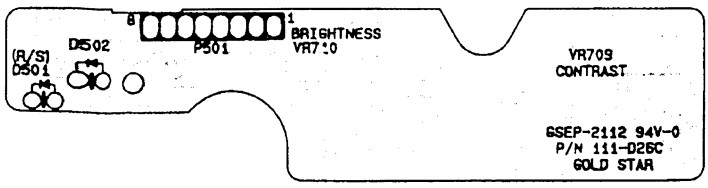
VOLUME BOARD(TOP SIDE)



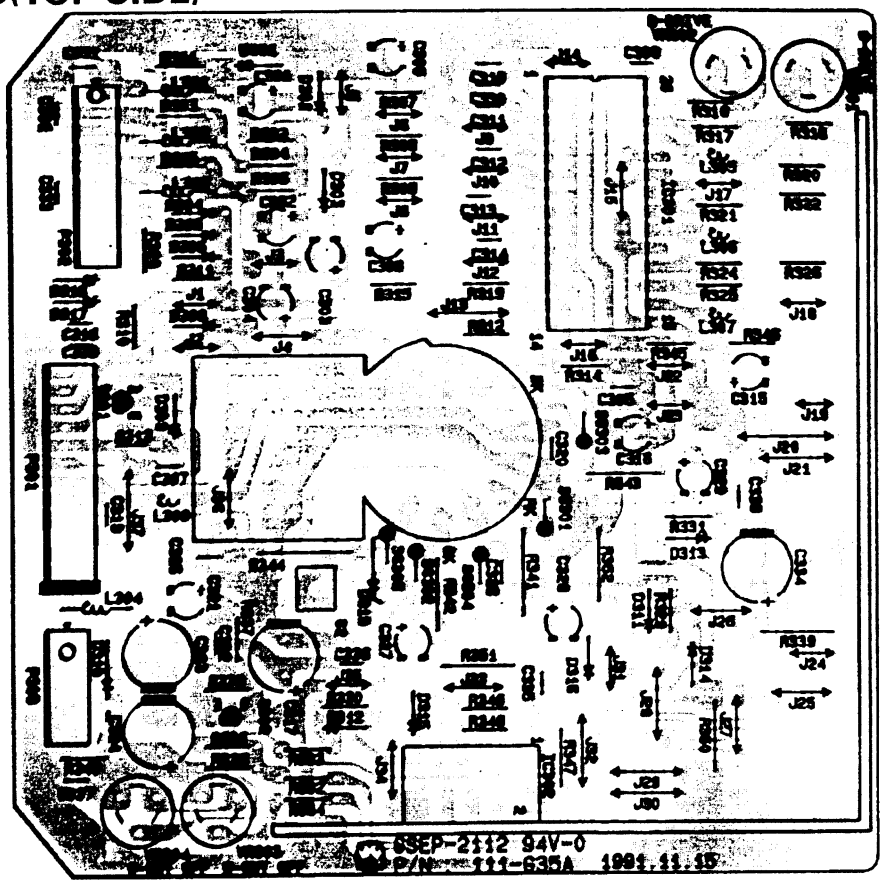
MAIN BOARD(BOTTOM SIDE)



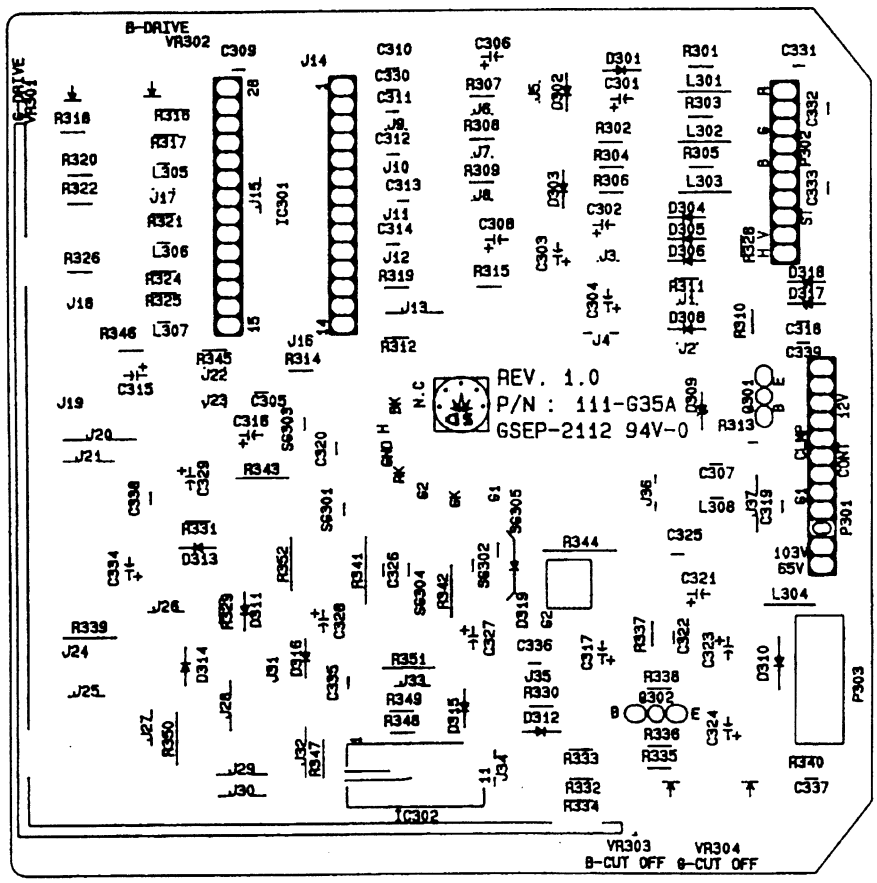
VOLUME BOARD(BOTTOM SIDE)



CPT BOARD(TOP SIDE)



CPT BOARD(BOTTOM SIDE)



REPLACEMENT PARTS LIST

CAUTION: Before replacing any these components, read carefully the "SAFETY PRECAUTIONS" on page 8.
Do not degrade the safety of the receiver through improper servicing.

ABBREVIATIONS: Capacitors..... CC: Ceramic (TC), CE: Chemical, CK: Ceramic (Hi-K)
MPP: Metalized Polypropylens, BP: Bipolor, CQ: Mylar
PE: Polyester, PP: Polypropylene
Resistors..... RD: Carbon Film, RS: Metal Oxide Film
RN: Metal Film, VR: Variable, RF: Fusing
(**S**: Recommended Service Parts, **R**: Replacement Service Parts)

1. MAIN BOARD

NO.	REF. NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
1	C202	0CK2210K515	CAP	CK, 220pF 50V	R
2	C203	0CE1066F618	CAP	CE, 10uF 16V	R
3	C204	0CK1040K945	CAP	CK, 0.1uF 50V	R
4	C205	0CE4756K618	CAP	CE, 4.7uF 50V	R
5	C206	0CK1040K945	CAP	CK, 0.1uF 50V	R
6	C207	0CE1056K618	CAP	CE, 1uF 50V	R
7	C208	0CK1040K945	CAP	CK, 0.1uF 50V	R
8	C209	0CK1040K945	CAP	CK, 0.1uF 50V	R
9	C601	0CQ1031N509	CAP	CQ, 0.01uF 100V	R
10	C602	0CE1076K618	CAP	CE, 100uF 50V	R
11	C603	0CE1056K618	CAP	CE, 1uF 50V	R
12	C604	0CE1076H618	CAP	CE, 100uF 25V	R
13	C605	181-288G	CAP	CQ, 0.33uF 100V	S
14	C606	0CQ1041N509	CAP	CQ, 0.1uF 100V	R
15	C607	0CQ1041N509	CAP	CQ, 0.1uF 100V	R
16	C608	0CK1040K945	CAP	CK, 0.1uF 50V	R
17	C609	181-288B	CAP	CQ, 0.1uF 100V	S
18	C610	0CE1056K618	CAP	CE, 1uF 50V	R
19	C612	0CE106CP618	CAP	CE, 10uF 160V	R
20	C613	0CE2276H618	CAP	CE, 220uF 25V	R
21	C614	0CE4766H618	CAP	CE, 47uF 25V	R
22	C615	0CE228CF618	CAP	CE, 2200uF 16V	S
23	C701	0CK1010K515	CAP	CK, 100pF 50V	R
24	C702	0CQ1021N509	CAP	CQ, 0.001uF 100V	R
25	C703	0CQ1021N509	CAP	CQ, 0.001uF 100V	R
26	C704	181-300G	CAP	PU 3300pF 100V	S
27	C705	0CE1056K618	CAP	CE, 1uF 50V	R
28	C706	0CE1056K618	CAP	CE, 1uF 50V	R
29	C707	181-300C	CAP	PU 1500pF 100V	S
30	C708	0CQ1821N419	CAP	CQ, 1800pF 100V	R
31	C709	0CE108CF618	CAP	CE, 1000uF 16V	R
32	C710	0CK1040K945	CAP	CK, 0.1uF 50V	R
33	C712	0CE1066F618	CAP	CE, 10uF 16V	R
34	C713	0CE4766F618	CAP	CE, 47uF 16V	R
35	C714	0CE1056K618	CAP	CE, 1uF 50V	R
36	C715	0CQ1531N519	CAP	CQ, 0.015uF 100V	R
37	C716	0CE4766K618	CAP	CE, 47uF 50V	R
38	C717	0CE1051P618	CAP	CE, 1uF 160v	R
39	C718	0CE107CP618	CAP	CE, 100uF 160V	R
40	C719	0CE4751P618	CAP	CE, 4.7uF 160V	R
41	C720	0CE1066K618	CAP	CE, 10uF 50V	R
42	C721	0CE2276F618	CAP	CE, 220uF 16V	R
43	C722	0CE2276F618	CAP	CE, 220uF 16V	R
44	C723	0CQ5621N419	CAP	CQ, 5600pF 100V	R
45	C724	181-308Q	CAP	PU 0.015uF 630V	S
46	C725	181-309Q	CAP	BUP, 5600pF 16KV	S
47	C726	181-292B	CAP	MPP 0.68uF 250V	S
48	C727	0CE4766K618	CAP	CE, 47uF 50V	R
49	C728	0CK1040K945	CAP	CK, 0.1uF 50V	R
50	C729	0CK1040K945	CAP	CK, 0.1uF 50V	R
51	C730	0CK1040K945	CAP	CK, 0.1uF 50V	R
52	C750	181-288B	CAP	CQ, 0.1uF 100V	S
53	⚠C901	181-430D	CAP	0.0022uF Y-CAP	S
54	⚠C903	181-278A	CAP	MUA 01uF (UL/CSA,VDE)	S
55	⚠C904	181-430D	CAP	0.0022uF Y-CAP	S
56	⚠C905	181-430D	CAP	0.0022uF Y-CAP	S
57	⚠C906	181-278A	CAP	MUA 01uF (UL/CSA,VDE)	S
58	C907	181-287A	CAP	CE, 220uF 200V	S
59	C908	181-287A	CAP	CE, 220uF 200V	S
60	C909	0CE1056N618	CAP	CE, 1uF 100V	S
61	C910	0CE2266N618	CAP	CE, 22uF 100V	S
62	C911	0CQ4731N509	CAP	CQ, 0.047uF 100V	S
63	C913	181-308N	CAP	PU 0.01uF 630V	S
64	C914	0CK8210W515	CAP	CK, 820pF 500V	S
65	C915	0CK2210W515	CAP	CK, 220pF 500V	R
66	C921	0CE336CP618	CAP	CE, 33uF 160V	S
67	C924	0CE476CP618	CAP	CE, 47uF 160V	R
68	C925	0CE4776F618	CAP	CE, 470uF 16V	R
69	C926	0CE107CN618	CAP	CE, 100uF 100V	R
70	C927	0CE108CH618	CAP	CE, 1000uF 25V	S
71	C928	0CE2276H618	CAP	CE, 220uF 25V	S
72	C932	0CE1066F618	CAP	CE, 10uF 16V	R
73	C933	0CE1066K618	CAP	CE, 10uF 50V	R
74	C934	0CE1076F618	CAP	CE, 100uF 16V	R
75	C935	0CE1056K618	CAP	CE, 1uF 50V	R
76	D202	0DD247109AA	DIODE	1S2471	R
77	D203	0DZ510009AB	DIODE	ZENER 5.1V	R
78	D204	0DD247109AA	DIODE	1S2471	R
79	D205	0DD247109AA	DIODE	1S2471	R
80	D601	0DD400109DB	DIODE	1N4001	R
81	D602	0DZ510009AB	DIODE	ZENER 5.1V	R
82	D603	0DD247109AA	DIODE	1S2471	R
83	D604	0DD247109AA	DIODE	1S2471	R
84	D605	0DZ620009AA	DIODE	ZENER 6.2V	R
85	D606	0DD247109AA	DIODE	1S2471	R
86	D701	0DZ510009AB	DIODE	ZENER 5.1V	R
87	D702	0DD247109AA	DIODE	1S2471	R
88	D703	0DD400109DB	DIODE	1N4001	R
89	D704	0DD400109DB	DIODE	1N4001	R
90	⚠D705	0DD100009DD	DIODE	RGP10D	S
91	D706	0DD100009DE	DIODE	RGP10G	S
92	D707	0DD100009DE	DIODE	RGP10G	S

NO.	REF NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
93	⚠D708	0DD400000AE	DIDOE	RG4A	S
94	⚠D709	0DD400000AB	DIDOE	RU4DS	S
95	D710	0DZ9100093A	DIODE	ZENER 9.1V	R
96	D711	0DD247109AA	DIODE	1S2471	R
97	D713	0DD400309AE	DIODE	1N4003	S
98	D714	0DD400309AE	DIODE	1N4003	S
99	D715	0DD100009DE	DIODE	RGP10G	S
100	D716	0DD247109AA	DIODE	1S2471	R
101	⚠D901	0DD156000AB	DIODE	RB156, BRIDGE DIODE	S
102	D902	0DD493309AA	DIODE	1N4933GP	S
103	D903	0DD400109DB	DIODE	1N4001	S
104	D904	0DD200009BA	DIODE	EGP20D	S
105	D905	0DD100009AH	DIODE	ES1FV	S
106	D907	0DD100009DE	DIODE	RGP10G	S
107	D908	0DD100009DD	DIODE	RGP10D	S
108	D909	0DD100009DE	DIODE	RGP10G	S
109	D910	0DD200009BA	DIODE	EGP20D	S
110	D911	0DD200009AH	DIODE	RU2AMV	S
111	D912	0DD200009AH	DIODE	RU2AMV	S
112	⚠D913	0DZ270009AA	DIODE	ZENER 27V	S
113	⚠D914	0DD247109AA	DIODE	1S2471	S
114	D916	0DD247109AA	DIODE	1S2471	R
115	D917	0DD247109AA	DIODE	1S2471	R
116	D918	0DD247109AA	DIODE	1S2471	S
117	F901	131-036D	FUSE	2.5A 125V (UL/CSA)	S
118	IC201	0IGS600909A	IC	GC 600909 (ASIC I.C)	S
119	IC601	0ISG167500A	IC	TDA1675A	S
120	IC701	0ISA785100A	IC	LA7851	S
121	IC702	0IGS358000A	IC	GL358	S
122	⚠IC901	0IGL580410A	IC	STR 58041	S
123	⚠L701	150-468R	COIL	LINEARITY COIL	S
124	L702	150-235K	COIL	CHOKE COIL 3.5mH	S
125	L703	150-518F	COIL	CHOKE COIL	S
126	L704	150-235C	COIL	CHOKE COIL 100uH 1A	S
127	⚠L901	150-494E	COIL	LINE FILTER	S
128	⚠L902	150-509A	COIL	LINE FILTER	S
129	P701	366-921G	PIN	WAFER (L-G-8)(2.5S)	S
130	P702	366-139A	PIN	FLAT WAFER(BW-706)	S
131	P703	387-311Q	CABLE	MAIN TO VIDEO	S
132	P705	366-043A	PIN	PIN PLUG(1P)	S
133	P902	366-157A	PIN	PIN MOLEX 5096-02C	S
134	P904	366-112B	PIN	PLUG(2P)	S
135	PCB	111-G34A	PCB	MAIN PCB, CA-14	R
136	Q201	0TR319809AA	TR	KTC3198(KTC1815)	R
137	Q202	0TR319809AA	TR	KTC3198(KTC1815)	R
138	Q203	0TR319809AA	TR	KTC3198(KTC1815)	R
139	Q204	0TR319809AA	TR	KTC3198(KTC1815)	R
140	Q205	0TR319809AA	TR	KTC3198(KTC1815)	R
141	Q206	0TR319809AA	TR	KTC3198(KTC1815)	R
142	Q207	0TR319809AA	TR	KTC3198(KTC1815)	R
143	Q208	0TR319809AA	TR	KTC3198(KTC1815)	R
144	Q209	0TR319809AA	TR	KTC3198(KTC1815)	R
145	Q210	0TR127009AA	TR	KTA1270(KTA562)	R
146	Q211	0TR319809AA	TR	KTC3198(KTC1815)	S
147	Q601	0TR127009AA	TR	KTA1270(KTA562)	R
148	Q602	0TR319809AA	TR	KTC3198(KTC1815)	R
149	Q603	0TR319809AA	TR	KTC3198(KTC1815)	R
150	Q604	0TR319809AA	TR	KTC3198(KTC1815)	R
151	Q605	0TR319809AA	TR	KTC3198(KTC1815)	R
152	Q607	0TR127009AA	TR	KTA1270(KTA562)	S
153	Q608	0TR222909AB	TR	KTC2229	S
154	Q609	0TR320209AA	TR	KTC3202(KTC1959)	S
155	Q610	0TR127009AA	TR	KTA1270(KTA562)	R
156	Q611	0TR319809AA	TR	KTC3198(KTC1815)	

NO.	REF NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
157	Q612	0TR127009AA	TR	KTA1270(KTA562)	S
158	Q701	0TR319809AA	TR	KTC3198(KTC1815)	R
159	Q702	0TR319809AA	TR	KTC3198(KTC1815)	R
160	Q703	0TR319809AA	TR	KTC3198(KTC1815)	R
161	Q704	0TR319809AA	TR	KTC3198(KTC1815)	R
162	Q705	0TR319809AA	TR	KTC3198(KTC1815)	R
163	Q706	0TR319809AA	TR	KTC3198(KTC1815)	R
164	Q707	0TR200009AB	TR	KTC200	S
165	Q709	0TR319809AA	TR	KTC3198(KTC1815)	R
166	Q710	0TR222909AB	TR	KTC2229	S
167	Q711	0TR200009AB	TR	KTC200	S
168	⚠Q712	0TR978000AA	TR	MJE9780	S
169	⚠Q713	0TR184900AA	TR	2SD1849	S
170	Q714	0TR473000AA	TR	KTA473	S
171	Q715	0TR320209AA	TR	KTC3202(KTC1959)	S
172	Q716	0TR127009AA	TR	KTA1270(KTA562)	S
173	Q717	0TR319809AA	TR	KTC3198(KTC1815)	R
174	Q718	0TR319809AA	TR	KTC3198(KTC1815)	R
175	Q719	0TR949009AA	TR	KTA949	S
176	Q720	0TR127009AA	TR	KTA1270(KTA562)	S
177	Q721	0TR319809AA	TR	KTC3198(KTC1815)	R
178	⚠Q901	0TR320209AA	TR	KTC3202(KTC1959)	S
179	Q904	0TR222909AB	TR	KTC2229	S
180	Q905	0TR319809AA	TR	KTC3198(KTC1815)	R
181	⚠Q906	06400004	SCR	DRA5B	S
182	R201	0RD2202F609	RES	RD. 22K 1/6W	R
183	R202	0RD4701F609	RES	RD. 4.7K 1/6W	R
184	R203	0RD1001F609	RES	RD. 1K 1/6W	R
185	R204	0RD2202F609	RES	RD. 22K 1/6W	R
186	R205	0RD4701F609	RES	RD. 4.7K 1/6W	R
187	R206	0RD1001F609	RES	RD. 1K 1/6W	R
188	R207	0RD1800H609	RES	RD. 180 1/2W	R
189	R208	0RD1502F609	RES	RD. 15K 1/6W	R
190	R209	0RD7501F609	RES	RD. 7.5K 1/6W	R
191	R210	0RD7501F609	RES	RD. 7.5K 1/6W	R
192	R211	0RD4701F609	RES	RD. 4.7K 1/6W	R
193	R212	0RD4701F609	RES	RD. 4.7K 1/6W	R
194	R213	0RD4701F609	RES	RD. 4.7K 1/6W	R
195	R214	0RD4701F609	RES	RD. 4.7K 1/6W	R
196	R215	0RD4701F609	RES	RD. 4.7K 1/6W	R
197	R216	0RD4701F609	RES	RD. 4.7K 1/6W	R
198	R217	0RD1001F609	RES	RD. 1K 1/6W	R
199	R218	0RD1001F609	RES	RD. 1K 1/6W	R
200	R219	0RD5600F609	RES	RD. 560 1/6W	R
201	R220	0RD5600F609	RES	RD. 560 1/6W	R
202	R221	0RD5600F609	RES	RD. 560 1/6W	R
203	R222	0RD5600F609	RES	RD. 560 1/6W	R
204	R223	0RD5600F609	RES	RD. 560 1/6W	R
205	R224	0RD1001F609	RES	RD. 1K 1/6W	R
206	R225	0RD1001F609	RES	RD. 1K 1/6W	R
207	R226	0RD1001F609	RES	RD. 1K 1/6W	R
208	R227	0RD1001F609	RES	RD. 1K 1/6W	R
209	R228	0RD1001F609	RES	RD. 1K 1/6W	R
210	R229	0RD4702F609	RES	RD. 47K 1/6W	R
211	R230	0RD5600F609	RES	RD. 560 1/6W	R
212	R231	0RD1001F609	RES	RD. 1K 1/6W	R
213	R232	0RD1001F609	RES	RD. 1K 1/6W	R
214	R233	0RD1801F609	RES	RD. 1.8K 1/6W	R
215	R234	0RD1801F609	RES	RD. 1.8K 1/6W	R
216	R235	0RD3002F609	RES	RD. 30K 1/6W	R
217	R601	0RD1001F609	RES	RD. 1K 1/6W	R
218	R602	0RD7501F609	RES	RD. 7.5K 1/6W	R
219	R603	0RD1001F609	RES	RD. 1K 1/6W	R
220	R604	0RD1502G509	RES	RD. 15K 1/4W	R

NO.	REF. NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
221	R605	0RD1002F609	RES	RD. 10K 1/6W	R
222	R606	0RD1002F609	RES	RD. 10K 1/6W	R
223	R607	0RD1002F609	RES	RD. 10K 1/6W	R
224	R608	0RD1002F609	RES	RD. 10K 1/6W	R
225	R609	0RD6202F609	RES	RD. 62K 1/6W	R
226	R610	0RD2002F609	RES	RD. 20K 1/6W	R
227	R611	0RD3602G509	RES	RD. 36K 1/4W	R
228	R612	0RD7502F609	RES	RD. 75K 1/6W	R
229	R613	0RD5603F609	RES	RD. 560K 1/6W	R
230	R614	0RD1603F609	RES	RD. 160K 1/6W	R
231	R615	0RD1003F609	RES	RD. 100K 1/6W	R
232	R616	0RD5603F609	RES	RD. 560K 1/6W	R
233	R617	0RD7501F609	RES	RD. 7.5K 1/6W	R
234	R618	0RD2200F609	RES	RD. 220 1/6W	R
235	R619	0RD1002F609	RES	RD. 10K 1/6W	R
236	R620	0RD5603F609	RES	RD. 560K 1/6W	R
237	R621	0RD2202F609	RES	RD. 22K 1/6W	R
238	R622	0RD1002G509	RES	RD. 10K 1/4W	R
239	R623	0RD7501F609	RES	RD. 7.5K 1/6W	R
240	R624	0RD0221F609	RES	RD. 2.2 1/6W	R
241	R625	0RD8201F609	RES	RD. 8.2K 1/6W	R
242	R626	0RD1002F609	RES	RD. 10K 1/6W	R
243	R627	0RD3300H609	RES	RD. 330 1/2W	R
244	R628	0RD1100H609	RES	RD. 110 1/2W	R
245	R629	0RD1100H609	RES	RD. 110 1/2W	R
246	R630	0RD3901F609	RES	RD. 3.9K 1/6W	R
247	R631	0RD1300F609	RES	RD. 130 1/6W	R
248	R632	0RD3001F609	RES	RD. 3K 1/6W	R
249	R633	0RD0101G609	RES	RD. 1K 1/4W	R
250	R634	0RD6804F609	RES	RD. 6.8M 1/6W	R
251	R635	0RD0221F609	RES	RD. 2.2 1/6W	R
252	R636	0RD6804F609	RES	RD. 6.8M 1/6W	R
253	R637	0RD1001F609	RES	RD. 1K 1/6W	R
254	R638	0RD8200F609	RES	RD. 820 1/6W	R
255	R639	0RD2701F609	RES	RD. 2.7K 1/6W	R
256	R701	0RD1201F609	RES	RD. 1.2K 1/6W	R
257	R702	0RD2202F609	RES	RD. 22K 1/6W	R
258	R703	0RD1202F609	RES	RD. 12K 1/6W	R
259	R704	0RD2701F609	RES	RD. 2.7K 1/6W	R
260	R706	0RD3901F609	RES	RD. 3.9K 1/6W	R
261	R707	0RD8201F609	RES	RD. 8.2K 1/6W	R
262	R708	0RD3302F609	RES	RD. 33K 1/6W	R
263	R709	0RD1001F609	RES	RD. 1K 1/6W	R
264	R710	0RD1002G509	RES	RD. 10K 1/4W	R
265	R711	0RD1500F609	RES	RD. 150 1/6W	R
266	R712	0RD1502F609	RES	RD. 15K 1/6W	R
267	R713	0RD4703F609	RES	RD. 470K 1/6W	R
268	R714	0RD1602F609	RES	RD. 16K 1/6W	R
269	R715	0RD1002F609	RES	RD. 10K 1/6W	R
270	R716	0RD1002F609	RES	RD. 10K 1/6W	R
271	R717	0RD1002F609	RES	RD. 10K 1/6W	R
272	R718	0RD2001F609	RES	RD. 2K 1/6W	R
273	R719	0RD1002F609	RES	RD. 10K 1/6W	R
274	R720	0RD1002F609	RES	RD. 10K 1/6W	R
275	R721	0RD8202G509	RES	RD. 82K 1/4W	R
276	R722	0RD1002F609	RES	RD. 10K 1/6W	R
277	R723	0RD1002F609	RES	RD. 10K 1/6W	R
278	R724	0RD2702F609	RES	RD. 27K 1/6W	R
279	R725	0RD2200F609	RES	RD. 220 1/6W	R
280	R726	0RS0472L667	RES	RS. 47 3W	S
281	R727	0RD5600F609	RES	RD. 560 1/6W	R
282	R728	0RD2200F609	RES	RD. 220 1/6W	R
283	R729	0RD1002F609	RES	RD. 10K 1/6W	R
284	R730	0RD7501F609	RES	RD. 7.5K 1/6W	R

NO	REF. NO	PART NO	CATEGORY	REFERENCE(SPEC.)	REM-ARK
285	R731	0RD1501F609	RES	RD. 1.5K 1/6W	R
286	R732	0RD7501F609	RES	RD. 7.5K 1/6W	R
287	R733	0RD3901F609	RES	RD. 3.9K 1/6W	R
288	R734	0RD1002F609	RES	RD. 10K 1/6W	R
289	R737	0RD3301F609	RES	RD. 3.3K 1/6W	R
290	R738	0RD2402F609	RES	RD. 24K 1/6W	R
291	R739	0RD1202F609	RES	RD. 12K 1/6W	R
292	R740	0RD1202F609	RES	RD. 12K 1/6W	R
293	R741	0RD8200F609	RES	RD. 820 1/6W	R
294	R742	0RD1001F609	RES	RD. 1K 1/6W	R
295	R743	0RD4702F609	RES	RD. 47K 1/6W	R
296	R744	0RD2702F609	RES	RD. 27K 1/6W	R
297	R745	0RD6802F609	RES	RD. 68K 1/6W	R
298	R746	0RD1003F609	RES	RD. 100K 1/6W	R
299	R747	0RD2003F609	RES	RD. 200K 1/6W	R
300	R748	0RD6202F609	RES	RD. 62K 1/6W	R
301	R749	0RD0222F609	RES	RD. 22 1/6W	R
302	R750	0RD3901F609	RES	RD. 3.9K 1/6W	R
303	R751	0RD4702H609	RES	RD. 47K 1/2W	R
304	F752	0RD4702H609	RES	RD. 47K 1/2W	R
305	R753	0RD2203F609	RES	RD. 220K 1/6W	R
306	R754	0RD2203F609	RES	RD. 220K 1/6W	R
307	R755	0RD1003F609	RES	RD. 100K 1/6W	R
308	R756	0RD2703F609	RES	RD. 270K 1/6W	R
309	R757	0RD1503F609	RES	RD. 150K 1/6W	R
310	R758	0RD0332F609	RES	RD. 33 1/6W	R
311	R759	0RD1002F609	RES	RD. 10K 1/6W	R
312	R760	0RD1203F609	RES	RD. 120K 1/6W	R
313	R761	0RD1001G609	RES	RD. 1K 1/4W	R
314	R762	0RD2401F609	RES	RD. 2.4K 1/6W	R
315	R763	0RD1000F609	RES	RD. 100 1/6W	R
316	R764	0RD1000F609	RES	RD. 100 1/6W	R
317	R765	0RD0182H609	RES	RD. 18 1/2W	R
318	R766	0RD0182H609	RES	RD. 18 1/2W	R
319	R767	0RD1001F609	RES	RD. 1K 1/6W	R
320	R768	0RD4701G609	RES	RD. 4.7K 1/4W	R
321	R769	0RD3000H609	RES	RD. 300 1/2W	R
322	R770	0RD0222F609	RES	RD. 22 1/6W	R
323	R771	0RD1002F609	RES	RD. 10K 1/6W	R
324	R772	0RD1002F609	RES	RD. 10K 1/6W	R
325	R773	0RD2001F609	RES	RD. 2K 1/6W	R
326	R774	0RD1001F609	RES	RD. 1K 1/6W	R
327	R776	0RD1003F609	RES	RD. 100K 1/6W	R
328	R777	0RD5602F609	RES	RD. 56K 1/6W	R
329	R778	0RD1002F609	RES	RD. 10K 1/6W	R
330	R901	0RD2203G609	RES	RD. 220K 1/4W	S
331	R902	0RD2203G609	RES	RD. 220K 1/4W	S
332	R903	180-104B	RES	RWR. 2.2 7W	S
333	R904	0RD3902H609	RES	RD. 39K 1/2W	R
334	R905	0RD1503H609	RES	RD. 150K 1/2W	R
335	R906	0RD1503H609	RES	RD. 150K 1/2W	R
336	R907	0RD0332H609	RES	RD. 33 1/2W	S
337	R908	0RD0332H609	RES	RD. 33 1/2W	S
338	R909	0RD0332F609	RES	RD. 33 1/6W	S
339	R910	0RN0151H609	RES	RN. 1.5 1/2W	S
340	R911	0RN0151H609	RES	RN. 1.5 1/2W	S
341	R912	180-173D	RES	RSF. 68K 3W	S
342	R913	0RD0152H609	RES	RD. 15 1/2W	S
343	R914	0RD0682H609	RES	RD. 68 1/2W	S
344	R916	0RF0470H609	RES	RF. 0.47 1/2W	S
345	R920	0RD2401F609	RES	RD. 2.4K 1/6W	R
346	R921	0RD0222F609	RES	RD. 22 1/6W	R
347	R922	0RD1003F609	RES	RD. 100K 1/6W	R
348	R923	0RD1002F609	RES	RD. 10K 1/6W	R

NO	REF NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
349	R924	0RD2401F609	RES	RD, 2.4K 1/6W	R
350	R926	0RD1002F609	RES	RD, 10K 1/6W	R
351	R927	0RD1002F609	RES	RD, 10K 1/6W	R
352	⚠ T701	151-269E	TRANS	HDT	S
353	⚠ T702	154-185A	FBT	1FGV19	S
354	⚠ T901	151-414B	TRANS	PULSE TRANS	S
355	⚠ T902	151-405A	TRANS	SMPS TRANS	S
356	⚠TH901	163-035A	PTC	PTH451C263G8ROM140	S
357	VR601	180-159G	VR	VR ARRAY, 10KB x 4	S
358	VR602	180-035U	VR	EVN-DJA 100KB	S
359	VR603	180-159G	VR	VR ARRAY, 10KB x 4	S
360	VR701	180-037L	VR	END-DCA 5KB	S
361	VR702	180-037L	VR	END-DCA 5KB	S
362	VR703	180-159G	VR	VR ARRAY, 10KB x 4	S
363	VR704	180-037J	VR	END-DCA 2KB	S
364	VR705	180-035L	VR	END-DJA 5KB	S
365	VR706	180-159G	VR	VR ARRAY, 10KB x 4	S
366	⚠VR707	180-037W	VR	END-DCA 200KB	S
367	VR708	180-037L	VR	END-DCA 5KB	S
368	VR711	180-037J	VR	END-DCA 2KB	S
369	C940	181-430D	CAP	0.0022uF Y-CAP	S

2.VIDEO

NO.	REF NO	PART NO	CATEGORY	REFERENCE(SPEC.)	REM-ARK
1	C301	0CE1066F618	CAP	CE, 10uF 16V	R
2	C302	0CE1066F618	CAP	CE, 10uF 16V	R
3	C303	0CE1066F618	CAP	CE, 10uF 16V	R
4	C304	0CE1066F618	CAP	CE, 10uF 16V	R
5	C305	0CK1040K945	CAP	CK, 0.1uF 50V	R
6	C306	0CE4756K618	CAP	CE, 4.7uF 50V	R
7	C307	0CC2210K405	CAP	CC, 220P 50V	R
8	C308	0CE4776F618	CAP	CE, 470uF 16V	R
9	C310	0CK1040K945	CAP	CK, 0.1uF 50V	R
10	C311	0CK1040K945	CAP	CK, 0.1uF 50V	R
11	C312	0CK1040K945	CAP	CK, 0.1uF 50V	R
12	C313	0CK1040K945	CAP	CK, 0.1uF 50V	R
13	C314	0CK1040K945	CAP	CK, 0.1uF 50V	R
14	C315	0CE4756K618	CAP	CE, 4.7uF 50V	R
15	C316	0CE2276F618	CAP	CE, 220uF 16V	R
16	C317	0CE107CN618	CAP	CE, 100uF 100V	R
17	C318	0CK1020K515	CAP	CK, 1000 pF 50V	R
18	C319	0CK1040K945	CAP	CK, 0.1uF 50V	R
19	C320	0CK1040K945	CAP	CK, 0.1uF 50V	R
20	C321	0CE1056N618	CAP	CE, 1uF 100V	R
21	C322	0CC2210K405	CAP	CC, 220P 50V	R
22	C323	0CE476CN618	CAP	CE, 47uF 100V	R
23	C324	0CE106CP618	CAP	CE, 10uF 160V	S
24	C325	0CK2220W515	CAP	CK, 2200P 500V	R
25	C326	181-312M	CAP	CK, 0.01uF 1KV	S
26	C327	0CE1056N618	CAP	CE, 1uF 100V	R
27	C328	0CE1056N618	CAP	CE, 1uF 100V	R
28	C329	0CE1056N618	CAP	CE, 1uF 100V	R
29	C330	0CK1040K945	CAP	CK, 0.1uF 50V	R
30	C334	0CE476CN618	CAP	CE, 47uF 100V	R
31	C335	0CK1040K945	CAP	CK, 0.1uF 50V	R
32	C336	0CK2220W515	CAP	CK, 2200P 500V	R
33	C338	0CK2220W515	CAP	CK, 2200P 500V	R
34	C339	0CK1040K945	CAP	CK, 0.1uF 50V	R
35	D301	0DD247109AA	DIODE	1S2471	R
36	D302	0DD247109AA	DIODE	1S2471	R
37	D303	0DD247109AA	DIODE	1S2471	R
38	D304	0DD247109AA	DIODE	1S2471	R
39	D305	0DD247109AA	DIODE	1S2471	R
40	D306	0DD247109AA	DIODE	1S2471	R
41	D308	0DD247109AA	DIODE	1S2471	R
42	D309	0DZ240009BB	DIODE	ZENER 24V	R
43	D310	0DD400309AE	DIODE	1N4003	S
44	D311	0DD247109AA	DIODE	1N2471	R
45	D312	0DD247109AA	DIODE	1N2471	R
46	D313	0DD247109AA	DIODE	1N2471	R
47	D314	0DD247109AA	DIODE	1N2471	R
48	D315	0DD247109AA	DIODE	1N2471	R
49	D316	0DD247109AA	DIODE	1N2471	R
50	D317	0DZ620009AA	DIODE	ZENER 6.2V	R
51	D318	0DZ620009AA	DIODE	ZENER 6.2V	R
52	G2	366-043A	PIN	PIN PLUG(1P)	S
53	IC301	0INS120300A	I.C	LM1203	S
54	IC302	0INS241600A	I.C	LM2416CT	S
55	L301	125-022J	CORE	FERRITE	S
56	L302	125-022J	CORE	FERRITE	S
57	L303	125-022J	CORE	FERRITE	S
58	L304	125-022J	CORE	FERRITE	S
59	L305	0LR0221K515	COIL	PEAKING COIL 2.2uH	S
60	L306	0LR0221K515	COIL	PEAKING COIL 2.2uH	S
61	L307	0LR0221K515	COIL	PEAKING COIL 2.2uH	S
62	L308	0LR0561K515	COIL	PEAKING COIL 5.6uH	S

NO.	REF. NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
63	P301	366-921L	PIN	WAFER IL-G 12(2.5)	S
64	P302	366-039J	PIN	MOLEX 5045-10A (2.5)	S
65	P303	366-043B	PIN	ASST PLUG(2P)	S
66	PCB	111-G35A	PCB	VIDEO PCB, CB-14	S
67	Q301	0TR319809AA	TR	KTC3198(KTC1815)	R
68	Q302	0TR319809AA	TR	KTC3198(KTC1815)	R
69	R301	0RD0822F609	RES	RD, 82 1/6W	R
70	R302	0RD8200F609	RES	RD, 820 1/6W	R
71	R303	0RD0822F609	RES	RD, 82 1/6W	R
72	R304	0RD8200F609	RES	RD, 820 1/6W	R
73	R305	0RD0822F609	RES	RD, 82 1/6W	R
74	R306	0RD8200F609	RES	RD, 820 1/6W	R
75	R307	0RD1002F609	RES	RD, 10K 1/6W	R
76	R308	0RD1002F609	RES	RD, 10K 1/6W	R
77	R309	0RD1002F609	RES	RD, 10K 1/6W	R
78	R310	0RD1501F609	RES	RD, 1.5K 1/6W	R
79	R311	0RD1001F609	RES	RD, 1.0K 1/6W	R
80	R312	0RD1801F609	RES	RD, 1.8K 1/6W	R
81	R313	0RD8201F609	RES	RD, 8.2K 1/6W	R
82	R314	0RD1801F609	RES	RD, 1.8K 1/6W	R
83	R315	0RD0681F609	RES	RD, 6.8 1/6W	R
84	R316	0RD0512F609	RES	RD, 51 1/6W	R
85	R317	0RD2200F609	RES	RD, 220 1/6W	R
86	R318	0RD3900F609	RES	RD, 390 1/6W	R
87	R319	0RD1001F609	RES	RD, 1.0K 1/6W	R
88	R320	0RD0681F609	RES	RD, 6.8 1/6W	R
89	R321	0RD2200F609	RES	RD, 220 1/6W	R
90	R322	0RD3900F609	RES	RD, 390 1/6W	R
91	R324	0RD0681F609	RES	RD, 6.8 1/6W	R
92	R325	0RD2200F609	RES	RD, 220 1/6W	R
93	R326	0RD3900F609	RES	RD, 390 1/6W	R
94	R328	0RD0512F609	RES	RD, 51 1/6W	R
95	R329	0RD1004F609	RES	RD, 1.0M 1/6W	R
96	R330	0RD1004F609	RES	RD, 1.0M 1/6W	R
97	R331	0RD1004F609	RES	RD, 1.0M 1/6W	R
98	R332	0RD2200F609	RES	RD, 220 1/6W	R
99	R333	0RD2200F609	RES	RD, 220 1/6W	R
100	R334	0RD2200F609	RES	RD, 220 1/6W	R
101	R335	0RD1501F609	RES	RD, 1.5K 1/6W	R
102	R336	0RD1001F609	RES	RD, 1.0K 1/6W	R
103	R337	0RD8201F609	RES	RD, 8.2K 1/6W	R
104	R338	0RD1001F609	RES	RD, 1.0K 1/6W	R
105	R339	0RD1003F609	RES	RD, 100K 1/6W	R
106	R340	0RD1003F609	RES	RD, 100K 1/6W	R
107	R341	0RD0822H609	RES	RD, 82 1/2W	R
108	R342	0RD0822H609	RES	RD, 82 1/2W	R
109	R343	0RD0822H609	RES	RD, 82 1/2W	R
110	R344	0RD1500H609	RES	RD, 150 1/2W	R
111	R345	0RD5601F609	RES	RD, 5.6K 1/6W	R
112	R346	0RD6800F609	RES	RD, 680 1/6W	R
113	R347	0RD1000F609	RES	RD, 100 1/6W	R
114	R348	0RD1000F609	RES	RD, 100 1/6W	R
115	R349	0RD1000F609	RES	RD, 100 1/6W	R
116	R350	0RD1202H609	RES	RD, 12K 1/2W	R
117	R351	0RD1202H609	RES	RD, 12K 1/2W	R
118	R352	0RD1202H609	RES	RD, 12K 1/2W	R
119	SG301	165-010A	SPARK	SPARK GAP, DSP-301N-C04F	S
120	SG302	165-010A	SPARK	SPARK GAP, DSP-301N-C04F	S
121	SG303	165-010A	SPARK	SPARK GAP, DSP-301N-C04F	S
122	SG304	165-004A	SPARK	SPARK GAP, AG20PT	S
123	SG305	165-010A	SPARK	SPARK GAP, DSP-301N-C04F	S
124	SOCKET	381-199A	SOCKET	CPT, PCS626	S

NO.	REF. NO	PART NO.	CATEGORY	REFERENCE(SPEC.)	REM-ARK
125	VR301	180-037A	VR	SEMI VR 100B	S
126	VR302	180-037A	VR	SEMI VR 100B	S
127	VR303	180-171G	VR	SEMI VR 2.2KB	S
128	VR304	180-171G	VR	SEMI VR 2.2KB	S
1	D501	0DL113000AA	LED	KLG113L, GREEN, KEC	S
2	P501	387-573T	CABLE	MAIN TO CONTROL, 8P	S
3	PCB	111-D26C	PCB	CONTROL PCB CHORUS	S
4	VR709	180-186A	VR	VR, S15'8G4 10KB	S
5	VR710	180-186G	VR	VR, S15'8G4 100KB NCC	S
1	CABLE	387-756A	CABLE	SIGNAL CABLE, 4FT	S
2	⚠ CDT	112-832A	CDT	M34KDD5X02	S
3	CONNECTOR	387-219T	CABLE	POWER SW CONNECTOR	S
4	⚠ L903	150-373F	COIL	DEGAUSSING COIL	S
5	P/CORD	174-206A	CORD	S30279-1-AC16/AL/,GY, 6FT	S
6	⚠ P901	381-205A	SCOKET	AC INLET, EAC-333	S
7	⚠ S901	140-075G	SWITCH	SDL-1P UL/CSA/VDE	S

COMPARTISON TABLE

1 2 0 V			220 - 240V			REMARK
REF.NO.	PART NO.	DESCRIPTION	REF.NO	PART NO.	DESCRIPTION	
L901	150-494E	LINE FILTER	L901	150-314D	LINE FILTER 47M	
F901	131-036D	FUSE, 2.5A/125V	F901	131-082A	FUSE, 2A/250V	
C903	181-278A	MUAO.1M(UL/CSA,VDE)	C903	181-192D	0.47M/250V(ISKARA)	
C906	181-278A	MUAO.1M(UL/CSA,VDE)	C906	181-192D	0.47M/250V(ISKARA)	
C907	181-287A	220M 200V	C907	181-287E	200M 400V	
C908	181-287A	220M 200V	C908	971-0016	JUMPER WIRE	
J2	971-0016	JUMPER WIRE	J2		NO CONNECTION	
J3	971-0016	JUMPER WIRE	J3		NO CONNECTION	
TH901	163-035A	PTH451C	TH901	163-035C 163-035B	PTH451C180N PTH451C200N	
R903	180-104B	2.2 OHM 7W	R903	180-104F	4.7 OHM 7W	
P903		NONE	P903	366-059A	MOLEX 5096-02C	
L903	150-373F	DEGAUSSING	L903	150-373E 150-425K	DEGAUSSING DEGAUSSING	
C940	181-430D	SC 0.0022uF			NONE	

0.28 HITACHI VLMF CRT			0.28 NEC VLMF CRT			REMARK
REF.NO.	PART NO.	DESCRIPTION	REF.NO	PART NO.	DESCRIPTION	
R741	ORD8200F609	820 OHM 1/6W	R741	ORD2002F609	2K OHM 1/6W	
R738	ORD2402F609	24K OHM 1/6W	R738	ORD1501F609	1.5K OHM1/6W	
R748	ORD5602F609	56K OHM 1/6W	R748	ORD6202F609	62K OHM 1/6W	
C614	OCE4766H618	CE, 47uF 25V	C614	OCE1076H618	CE, 100uF 25V	MPR-II VERSION
C715	OCQ1531N519	153P	C715	OCQ6821N519	682P	
C723	OCQ5621N419	562P	C723		NONE	
CRT	112-835A	M34KDD80X06	CRT	112-849A	M34JUQ23XX245	

NORMAL CRT			WITH VLMF DY CRT			REMARK
REF.NO.	PART NO.	DESCRIPTION	REF.NO	PART NO.	DESCRIPTION	
R748	ORD6202F609	62K OHM 1/6W	R748	ORD5602F609	56K OHM 1/6W	
R742	ORD1001F609	1K OHM 1/6W	R742	ORD1501F609	1.5K OHM 1/6W	VLMF DY CRT : M34KDD80X06 M34JUQ23XX245
R733	ORD3901F609	3.9K OHM 1/6W	R733	ORD5101F609	5.1K OHM 1/6W	
FBT	154-185A 154-210A	1FGV19 2435335	FBT	154-210B 154-210C	2436882 2436883	
CRT	112-832A	M34KDD50X02	CRT	112-835A	M34KDD80X06	

MEDIUM SHORT CRT(X)			MEDIUM CRT(XE)			REMARK
REF.NO.	PART NO.	DESCRIPTION	REF.NO	PART NO.	DESCRIPTION	
R756	ORD2703F609	270K OHM 1/6W	R756	ORD2203F609	220K OHM 1/6W	
CRT	112-832A 112-835A 112-834A 112-849A	M34KDD50X02 M34KDD80X06 M34KBV80X11 M34JUQ23XX245	CRT	112-829A 112-816A	M34KDD50XE02 M34KBV80XE11	

WITH SS-DY CRT			WITH ST-DY CRT			REMARK
REF.NO.	PART NO.	DESCRIPTION	REF.NO	PART NO.	DESCRIPTION	
R614	ORD1603F609	160K OHM 1/6W	R614	ORD1003F609	100K OHM 1/6W	
R615	ORD1003F609	100K OHM 1/6W	R615	ORD5602F609	56K OHM 1/6W	
R621	ORD2202F609	22K OHM 1/6W	R621	ORD7501F609	7.5K OHM 1/6W	
R623	ORD7501F609	7.5K OHM 1/6W	R623	ORD4701F609	4.7K OHM 1/6W	
R630	ORD3901F609	3.9K OHM 1/6W	R630	ORD2401F609	2.4K OHM 1/6W	
R632	ORD3001F609	3K OHM 1/6W	R632	ORD2001F609	2K OHM 1/6W	
R726	ORS0472L667	RS, 47 OHM 3W	R726	ORS0332L667	RS, 33 OHM 3W	
R737	ORD3301F609	3.3K OHM 1/6W	R737	ORD5601F609	5.6K OHM 1/6W	
R738	ORD2402F609	24K OHM 1/6W	R738	ORD3302F609	33K OHM 1/6W	
R748	ORD6202F609	62K OHM 1/6W	R748	ORD7502F609	75K OHM 1/6W	
R756	ORD2703F609	270K OHM 1/6W	R756	ORD2403F609	240K OHM 1/6W	0.28 DOT CRT:
C614	OCE4766H618	CE 47uF 25V	C614	OCE1076H618	CE 100uF 25V	M34KDS20XX05 M34KDS10XX05
C725	181-309Q	5600pF/1.6kV	C725	181-309S	6800pF/1.6kV	
C723	OCQ5621N419	5600pF	C723		NONE	0.39 DOT CRT:
C715	OCQ1531N519	15000pF	C715	OCQ6821N519	6800pF	
L701	150-468R	LINEARITY COIL	L701	150-468U	LINEARITY COIL	M34JMA30X83 M34KDP25XX31 M34KDP15XX31
Q713 H/S	409-035A	HEAT SINK (H-OUT)	Q713 H/S	409-043A	HEAT SINK (H-OUT)	
IC601 H/S	409-034A	HEAT SINK (IC601)	IC601 H/S	409-042A	HEAT SINK (IC601)	
CRT	112-834A 112-832A	M34KBV80X11 M34KDD50X02	CRT	112-838A 2055-10191A 2055-10181A 2055-10191H 2055-10181C 2055-10501A 2055-10511A 2055-10501C 2055-10511H 2055-10171C 2055-10161C 2055-10171M 2055-10161E 2055-10621D 2055-10631L 2055-10621E 2055-10631M 2055-10621C 2055-10631C	M34JMA30X83 M34KDP25XX31 M34KDP15XX31 M34KDP25XX37 M34KDP15XX37 M34KVS15XX31 M34KVS25XX31 M34KVS15XX37 M34KVS25XX37 M34KDS20XX05 M34KDS10XX05 M34KDS20XX11 M34KDS10XX11 M34KVU10XX10 M34KVU20XX11 M34KVU10XX11 M34KVU20XX11 M34KVU10XX05 M34KVU20XX05	